KENWOOD

AV CONTROL CENTER

C-V751

INSTRUCTION MANUAL

KENWOOD CORPORATION

Units are designed for operation as follows.

Europe and U.K. .... AC 230 V only
Australia .... AC 240 V only

For the United Kingdom

Factory fitted moulded mains plug
1. The mains plug contains a fuse. For replacement, use only a 13-Amp ASTA-approved (BS1362) fuse.
2. The fuse cover must be refitted when replacing the fuse in the moulded plug.
3. Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adapter, or consult your dealer. If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.
IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:
Blue   : Neutral Brown   : Live
Do not connect those leads to the earth terminal of a three-pin plug.

Safety precautions

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

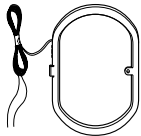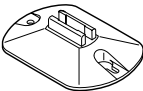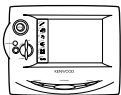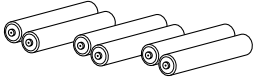| ⚡	**CAUTION** RISK OF ELECTRIC SHOCK DO NOT OPEN	⚠	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
⚡			THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
⚠			THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.
We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Keep this manual handy for future reference.

Accessories

FM indoor antenna (1)	AM loop antenna (1)	Loop antenna stand (1)	GRC-700 (1)	Batteries (R06/AA) (6)

Contents

4 Special features

True home theater sound

DTS

DTS (Digital Theater Systems) is a 5.1 channel digital audio format that provides five full-spectrum channels and one low-frequency (subwoofer) channel for unprecedented clarity, optimum channel separation and a (wide) dynamic range.
In the DTS mode, the 5.1 channel digital input from a DTS CD, LD or DVD disc (carrying the DTS marking) can be played in Digital Surround.
Important:
When a DTS disc is played on a CD, LD or DVD player, noise may be output from the analog output. It is recommended that you connect the digital output of the player to the digital input of this unit.

Dolby Digital (AC-3)

The DOLBY DIGITAL (AC-3) mode lets you enjoy full digital surround from software processed in the Dolby Digital (AC-3) format. Dolby Digital (AC-3) provides up to 5.1 channels of independent digital audio for better sound quality and more powerful presence than conventional Dolby Surround.

Dolby Pro Logic & Dolby 3 Stereo

This surround system reproduces theater-like surround sound from video software marked ▣▢ DOLBY SURROUND .
The PRO LOGIC mode uses the built-in adaptive matrix circuit to steer the Left, Center, Right and Surround channel audio signals.
The 3 STEREO mode will redirect the surround signal to the front left and right speakers when only the front and center speakers are used.

DSP surround modes

The DSP (Digital Signal Processor) used for this AV CONTROL CENTER incorporates a variety of high quality adjustable sound fields, like "**ARENA**", "**THEATER**", "**JAZZ CLUB**" to add the "presence" associated with an arena, theater, jazz club to the original signal. The DSP can process either PCM or analog sources.

Multi channel music (SRS Circle Surround)

SRS Circle surround enables you to listen to multi channel sound from the stereo source. We assume you have already enjoyed listening to Dolby digital sound / DTS multi channel sound with your multi speakers. Now, this time try listening to the stereo source (ex. Audio CD) using your multi speakers. You may discover a new type of "stereo" sound through SRS Circle Surround.

Graphical Remote Control unit "GRC"

The GRC unit incorporates a large-screen LCD which displays key icons and parameters. The LCD also shows information on the operating modes of the main unit. It incorporates sophisticated engineering and design to allow you to simply touch the screen to press buttons and operate controls. You can touch the screen with your finger or with the stylus stored at the top of the GRC.
To improve the operability, frequently used icons are located in the higher hierarchy in the LCD display and icons which are associated between each other are shown on the same screen.
The GRC unit is a multi-function remote control unit which can be programd to control AV components from other manufacturers than KENWOOD.

RDS (Radio Data System) tuner

The tuner of this AV CONTROL CENTER provides the RDS reception capability with wide functionality: The AUTO MEMORY automatically presets up to 40 RDS stations broadcasting different programs, the station name display shows you the name of the current broadcast station, and the PTY search lets you tune stations by program type.

ONE TOUCH OPERATION

Simply pressing the play key of the CD player or cassettedeck turns the system on and starts playback.

Low standby power consumption

The power consumption during standby is no more than 1.6 W.

How to use this manual

In this manual, the operating procedures are described on the left half of each page and the supplementary explanation, display information and other notes on each step are described on the right half.

(Example of instructions in this manual)

Operating procedure steps (Left half)   **Supplementary explanation** (Right half)

Step No.   Main unit key to be used   Remote control key to be used   Icon selection   Supplementary explanation for the main unit operation   Supplementary explanation for the graphical remote control operation

3 Select the tuning method.

Main unit	GRC
A.MEMO AUTO BAND	Mode

Main unit
① **AUTO** lit (auto tuning)
② AUTO not lit (manual tuning)

GRC
① **Auto** (auto tuning)
② **Manual** (manual tuning)

AUTO — Lights up

System connection

Connection of audio components (CD player, MD recorder, cassette deck, power amplifier)

Make connection as shown below.
When connecting the related system components, refer also to the instruction manuals of the related components.

⚠ Do not plug in the power lead until all connections are completed.

Malfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer referring to "In case of difficulty". → 61

DIGITAL IN jack

Remove the protective cap before using the DIGITAL IN jack.

— Remove cap

Shape of AC outlet

Australia x 1

System control cord

Optical fiber cable

ANTENNA AM
FM 75Ω GND

PREOUT
FRONT SURROUND CENTER
L
CONNECT
WITH
POWER AMPLIFIER
R
SUB WOOFER

VIDEO
REC PLAY
—VIDEO 1—

PLAY
—VIDEO 2—
DVD/
6CH.INPUT
MONITOR
OUT
CD
MD/TAPE1
TAPE 2/MON
DVD/6CH.INPUT
FRONT SURROUND CENTER
PLAY PLAY REC PLAY REC PLAY
SUB WOOFER

CD
(OPTICAL 1)
DVD
(COAXAL)
DIGITAL IN
SYSTEM
CONTROL

UNSWITCHED

To wall
AC outlet

PLAY
OUT

*² Cassette deck 2

REC IN

REC
IN
PLAY
OUT

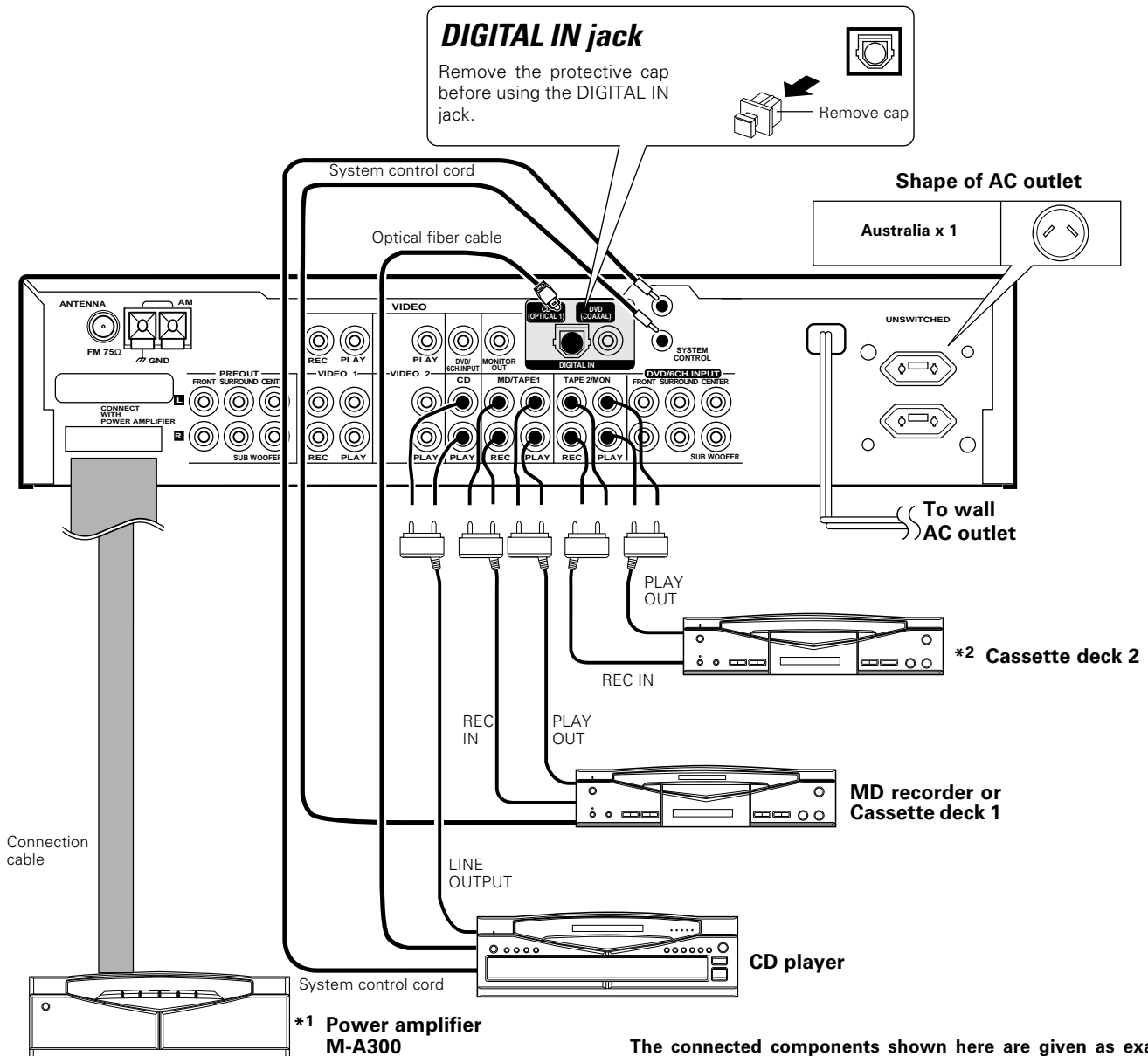MD recorder or
Cassette deck 1

LINE
OUTPUT

CD player

Connection
cable

System control cord

*¹ Power amplifier
M-A300

The connected components shown here are given as examples because the available models vary depending on marketing areas.

*¹ For the connection and operation procedures of the power amplifier and speakers, refer to the instruction manual of the power amplifier (M-A300).

Also connect the system control cords when the KENWOOD Audio Component System "SERIES 21" is connected.

*² Do not connect system control cord to the cassette deck connected to the TAPE 2/MONITOR jacks.

Caution regarding placement

Be sure to adhere followings. Or proper ventilation will be blocked causing damage or fire hazard.
● Do not place any objects impairing heat radiation onto the top of unit.
● Leave a space around the unit (from the largest outside dimension including projection) equal or greater than, shown below.

Top panel : 50 cm   Side panel : 10 cm   Back panel : 10 cm

6

Connection of video components (LD player, VCR, DVD)
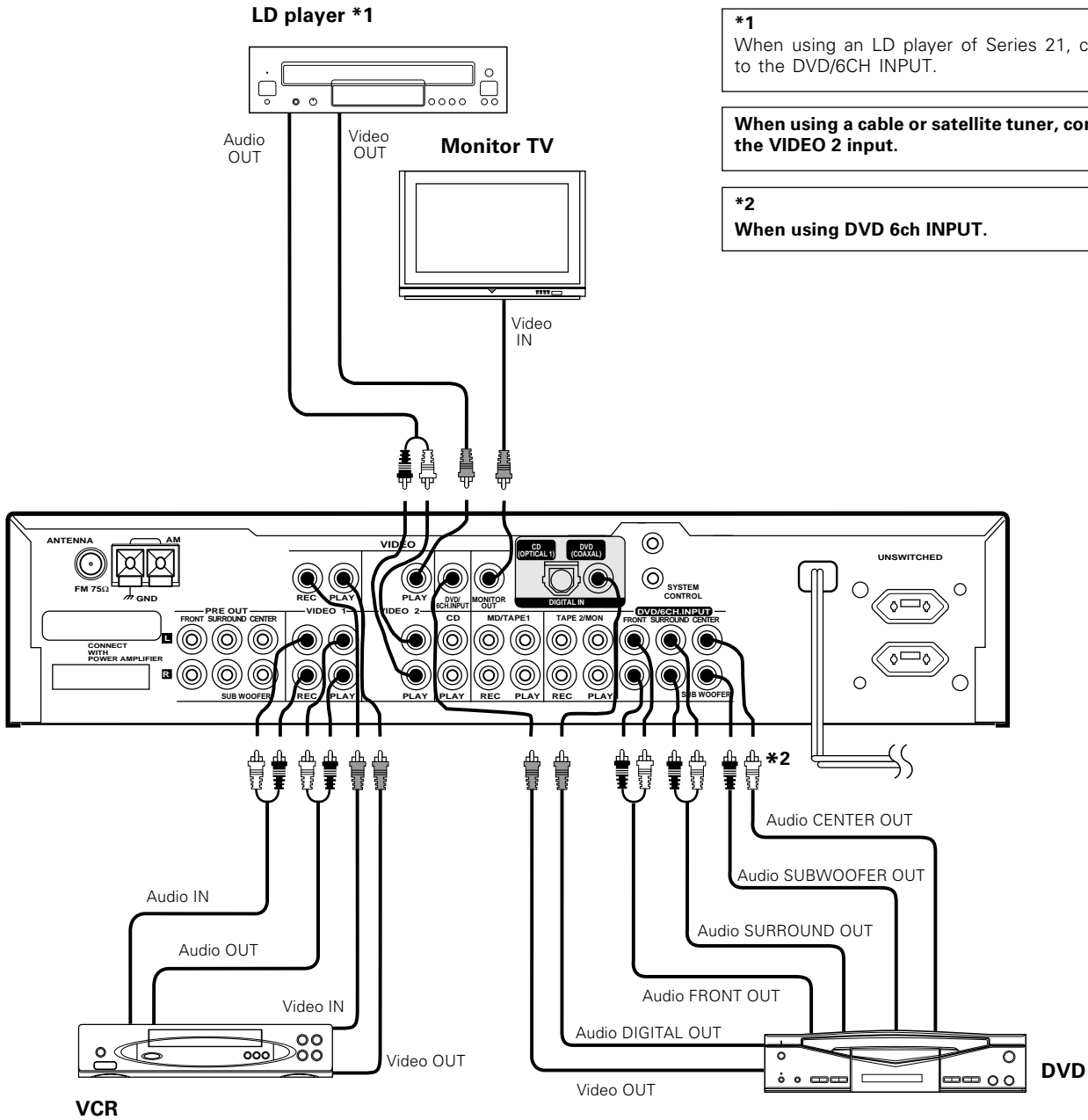
LD player *1

Audio OUT

Video OUT

Monitor TV

Video IN

*1
When using an LD player of Series 21, connect it to the DVD/6CH INPUT.

When using a cable or satellite tuner, connect it to the VIDEO 2 input.

*2
When using DVD 6ch INPUT.   →⌐10⌐

Audio IN

Audio OUT

Video IN

Video OUT

VCR

Audio CENTER OUT

Audio SUBWOOFER OUT

Audio SURROUND OUT

Audio FRONT OUT

Audio DIGITAL OUT

Video OUT

DVD

*2

The connected components are given as examples because the available models vary depending on marketing areas.

DTS disclaimer clause

DTS Digital Surround™ is a discrete 5.1 channel digital audio format available on CD, LD, and DVD software which consequently cannot be decoded and played back inside most CD, LD, or DVD players. For this reason, when DTS-encoded software is played back through the analog outputs of the CD, LD, or DVD player, excessive noise will be exhibited. To avoid possible damage to the audio system, proper precautions should taken by the consumer if the analog outputs are connected directly to an amplification system. To enjoy DTS Digital Surround™ playback, an external 5.1 channel DTS Digital Surround™ decoder system must be connected to the digital output (S/PDIF, AES/EBU, or TosLink) of the CD, LD or DVD player.
This unit is equipped with DTS Digital Surround™ decoder.

Digital connections

Make connections as shown below.
The digital in jacks can accept DTS, Dolby Digital (AC-3) or PCM signals. Connect components capable of outputting DTS, Dolby Digital (AC-3) or standard PCM (CD) format digital signals.
When connecting the related system components, be sure to also refer to the instruction manuals supplied with the components you are connecting.
Do not connect the power cord to a wall outlet until all connections are completed.

Connect components capable of outputting Dolby Digital (AC-3) or standard PCM format digital signals.

An LD player and DVD player cannot be connected simultaneously when an RF demodulator is used.

To connect an LD player with a DIGITAL RF OUT.
Connect the LD player to the KENWOOD RF digital demodulator (DEM-9991D). Then connect the demodulator to the AC-3 AUDIO INPUT DIGITAL IN.
Connect the video signal and analog audio signals to LD jacks (See "**Connection of video components**".) ➟ 6

AC-3 DIGITAL OUT

To connect an LD player with a DIGITAL OUT

AC-3 RF OUT

RCA pin cord

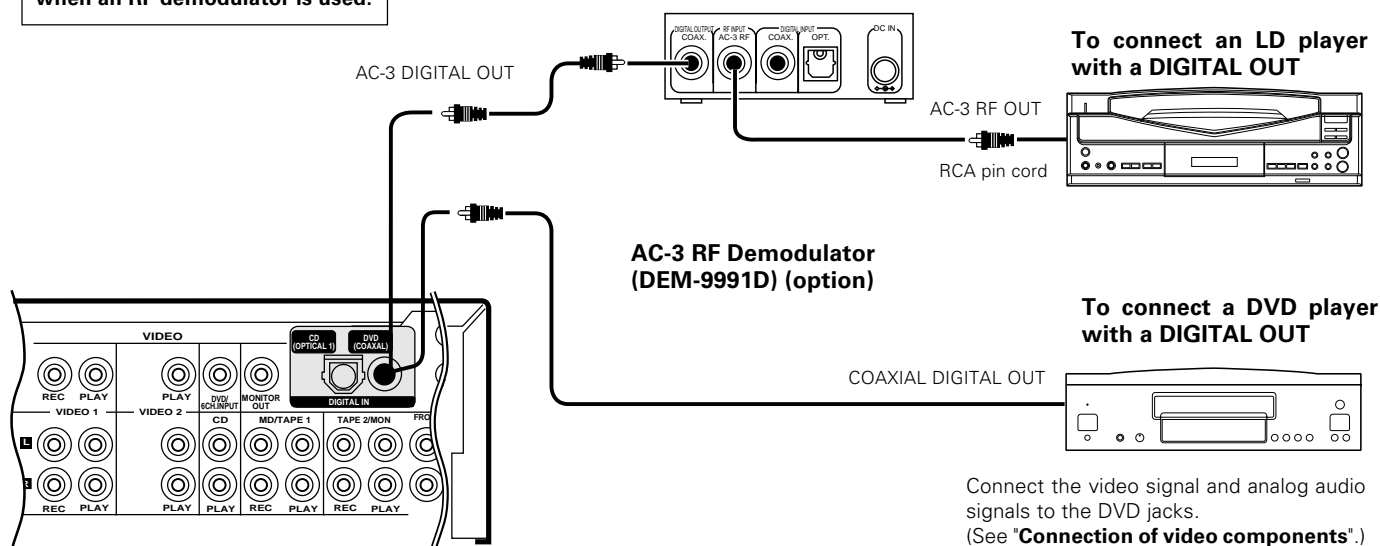**AC-3 RF Demodulator (DEM-9991D) (option)**
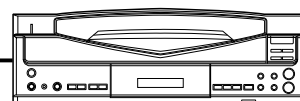
To connect a DVD player with a DIGITAL OUT

COAXIAL DIGITAL OUT
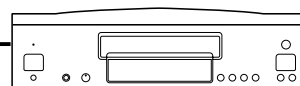
Connect the video signal and analog audio signals to the DVD jacks.
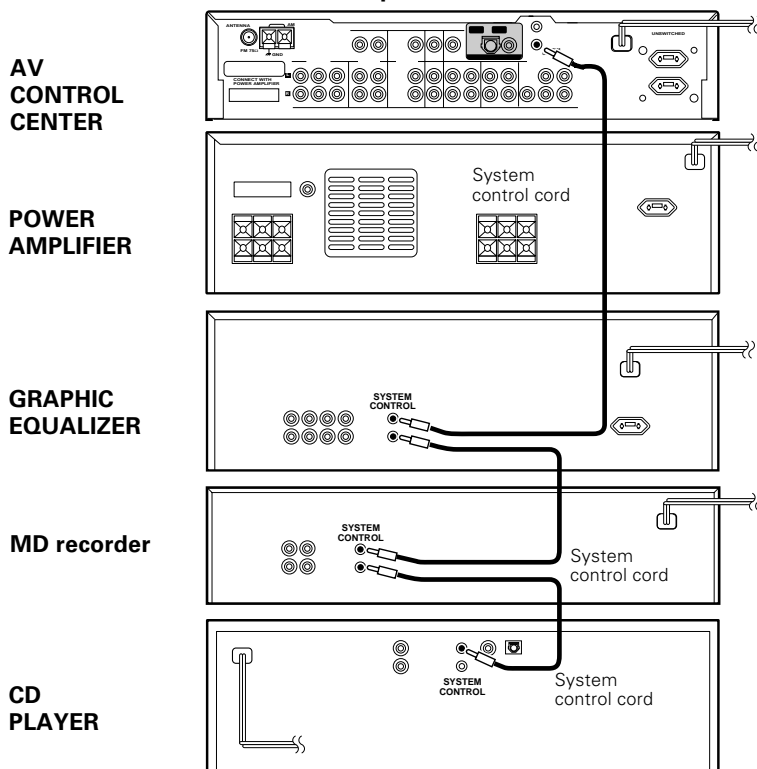(See "**Connection of video components**".) ➟ 6

The connected components are given as examples because the available models vary depending on marketing areas.

About the system control connections

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When this unit is connected to KENWOOD audio component system "SERIES 21", also connect them through the system control cords to allow system-control operations between components.

Connection example

AV CONTROL CENTER

POWER AMPLIFIER

System control cord

GRAPHIC EQUALIZER

SYSTEM CONTROL

MD recorder

SYSTEM CONTROL

System control cord

CD PLAYER

SYSTEM CONTROL

System control cord

The SERIES 21 components which can be system-connected with this unit include the LD player, MD recorder and DVD player.

Notes

1. Do not connect the SERIES 21 components to other system components using system control cords.
2. Do not connect system control cords to any components other than those specified by KENWOOD. It may cause a malfunction and damage your equipment.
3. Be sure the system control plugs are inserted all the way in to the system control terminals.
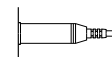
About the system control operations

(Available operations when SERIES 21 components are connected through system control cords)

Remote Control → 18
Lets you operate source components with the system remote supplied with this unit.
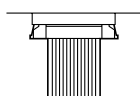
Automatic Operation → 22
When you start playback from a source component, the input selector on this unit switches to that component automatically. (Except TAPE 2)

Synchronized Recording → 31
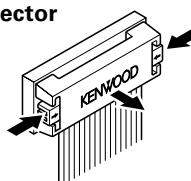Lets you synchronize recording with the start of playback when recording from CD etc.

Connection of flat-cable connector

Inserting the connector

Push in the connector straight into the socket until it clicks to indicate the locking.

Removing the connector

Push and hold the two ends of the connector, and pull it straight outward.

Notes

1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging / unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
3. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.
4. If the system control cords or audio cords are not connected properly, the remote control or automatic operation between system components will not work properly.
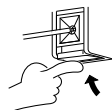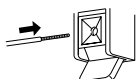
Connection of antenna
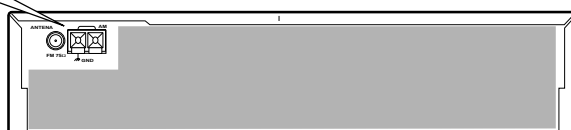
Connection method to each antenna terminal
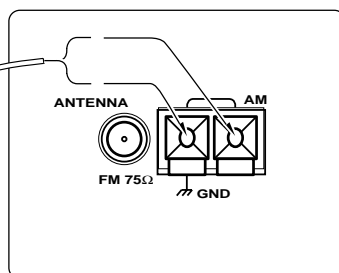
❶ **Push lever.**   ❷ **Insert cord.**   ❸ **Return lever.**

AM loop antenna connection

The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord, and set it to a direction which provides the best reception.

FM indoor antenna connection

The accessory antenna is for temporary indoor use only. For stable signal reception we recommend using an outdoor antenna. Remove the indoor antenna if you connect one outdoors.

FM outdoor antenna connection

Lead the 75 Ω coaxial cable connected to the FM outdoor antenna into the room and connect it to the FM 75 Ω terminal.

Use the commercially available antenna adaptor.
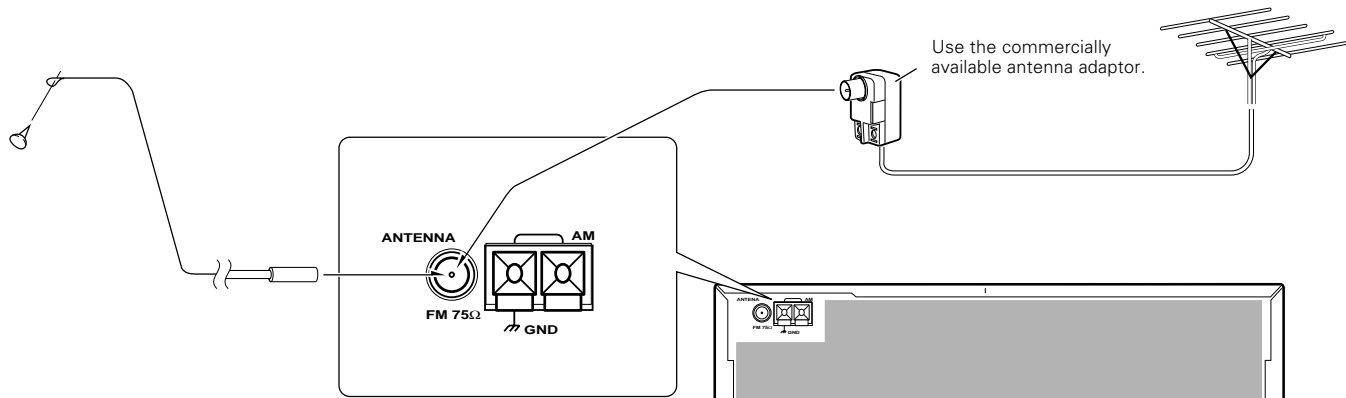
Using DVD 6ch INPUT

Opening/closing the door

❶ **Press the ON/STANDBY key to ON.**

I / ⏻

ON/STANDBY

❷ **Opening/closing the door**

OPEN/CLOSE

Note When opening or closing the door, be careful not to catch your finger in the door. Otherwise there is a risk of injury.
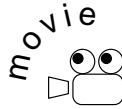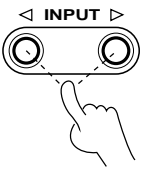
Changing the input selection display (AUTO key)

To make the system control operation, the input selection display should be switched according to the actually connected components. About the system control connections → 8

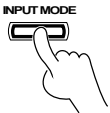To change the DVD display into the DVD 6CH display or LD display.

| Main unit | | GRC |

❶ **Select "DVD" with the INPUT SELECTOR .**

◁ **INPUT** ▷

movie

DVD
DVD/6CH.

❷ **Press the INPUT MODE key.**

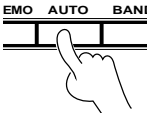**INPUT MODE**

listen mode

Input
Analog

Select the "Input Analog" icon.

EMO AUTO BAN

❸ **Press and hold the AUTO key for more than 2 seconds, until "DVD 6ch" is displayed. (Main unit only)**
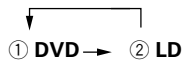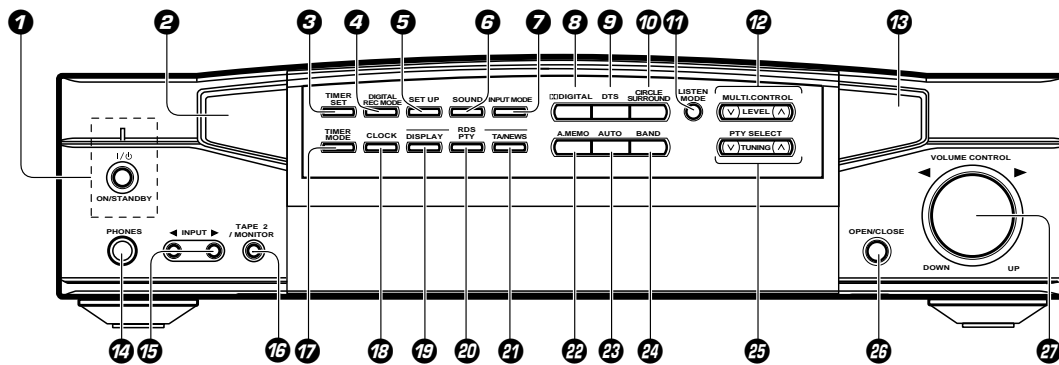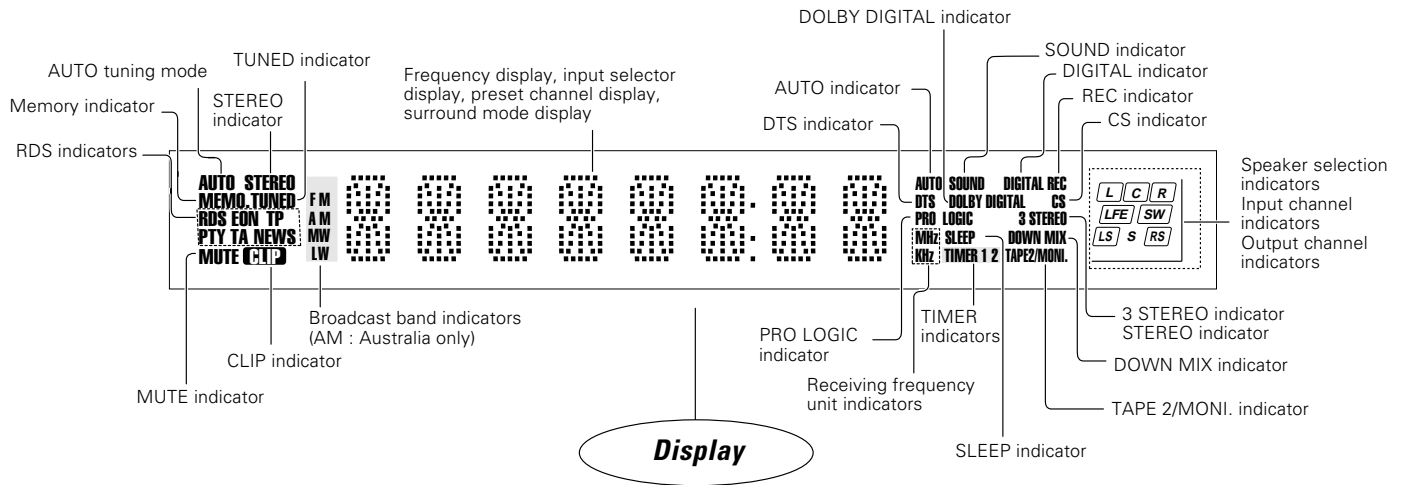
Analog input

Each press switches the indication.

① **DVD** → ② **DVD 6ch** → ③ **LD**

Digital input

Each press switches the indication.

① **DVD** → ② **LD**

Controls and indicators

DOLBY DIGITAL indicator

AUTO tuning mode
TUNED indicator
Frequency display, input selector display, preset channel display, surround mode display

SOUND indicator
DIGITAL indicator
REC indicator
CS indicator

Memory indicator
STEREO indicator
AUTO indicator

RDS indicators
DTS indicator

AUTO STEREO
MEMO. TUNED
RDS EON TP
PTY TA NEWS
MUTE CLIP

FM
AM
MW
LW

AUTO SOUND DIGITAL REC
DTS DOLBY DIGITAL CS
PRO LOGIC 3 STEREO
MHz SLEEP DOWN MIX
KHz TIMER 1 2 TAPE2/MONI.

L C R
LFE SW
LS S RS

Speaker selection indicators
Input channel indicators
Output channel indicators

Broadcast band indicators
(AM : Australia only)

PRO LOGIC indicator

TIMER indicators

3 STEREO indicator
STEREO indicator

CLIP indicator

Receiving frequency unit indicators

DOWN MIX indicator

MUTE indicator

TAPE 2/MONI. indicator

Display

SLEEP indicator

The keys which have the same names as the controls on the remote control unit provide the same functions as them.

❶ I/ ⏻ (ON/STANDBY) key/indicator →[10]
Press to switch between ON and STANDBY.

❷ Remote sensor

❸ TIMER SET key →[55]
Press to set the timer function.

❹ DIGITAL REC MODE key →[34]
Use to select the DIGITAL REC mode.

❺ SET UP key →[23]
Use to select the surround sound settings.

❻ SOUND key →[29]
Use to adjust the sound quality and ambience effects.

❼ INPUT MODE key →[18]
Use to switch between the digital and analog inputs.

❽ ⱅⱅDIGITAL key →[50]
Use to select the Dolby digital mode.

❾ DTS key →[50]

❿ CIRCLE SURROUND key →[50]

⓫ LISTEN MODE key →[50]
Use to select the listening mode.

⓬ MULTI. CONTROL key →[54]
Press to select various setting modes. These keys are also used in the clock adjustment and timer operations.

⓭ GRC transmitter
Outputs the signals transmitted to the Graphical Remote Control.

⓮ PHONES jack →[28]
For use in headphones listening.

⓯ INPUT SELECTOR keys →[10]
Press to select the input.

⓰ TAPE 2/MONITOR key →[28]
For use in monitoring of recording, etc.

⓱ TIMER MODE key →[55]
Press to switch the timer modes.

⓲ CLOCK key →[54]
Press when setting the clock.

⓳ RDS DISPLAY key →[39]
Press to switch the RDS display.

⓴ RDS PTY key →[43]
For use during reception of RDS broadcasting.

㉑ RDS TA/NEWS key →[46]
For use during reception of RDS broadcasting.

㉒ A.MEMO key →[40]
Press when using the auto memory function.

㉓ AUTO key →[10] →[38]
Press to select the tuning mode.
The auto tuning or manual tuning mode can be selected.
Pressing and holding this key for more than 2 seconds changes the **MD** input display to **TAPE 1** display or the **DVD** input display to **DVD 6ch INPUT** or **LD** display.

㉔ BAND key →[38]
Press to switch the broadcasting band.

㉕ TUNING keys (∨ , ∧) →[38]
Press to select the radio station to be received.

㉖ OPEN/CLOSE key →[10]

㉗ VOLUME CONTROL knob →[28]

Standby mode

While the standby indicator of the unit is lit, a small amount of current is flowing into the unit's internal circuitry to back up the memory. This condition is referred to as the standby mode of the unit. While the unit is in the standby mode, it can be turned ON from the remote control unit.
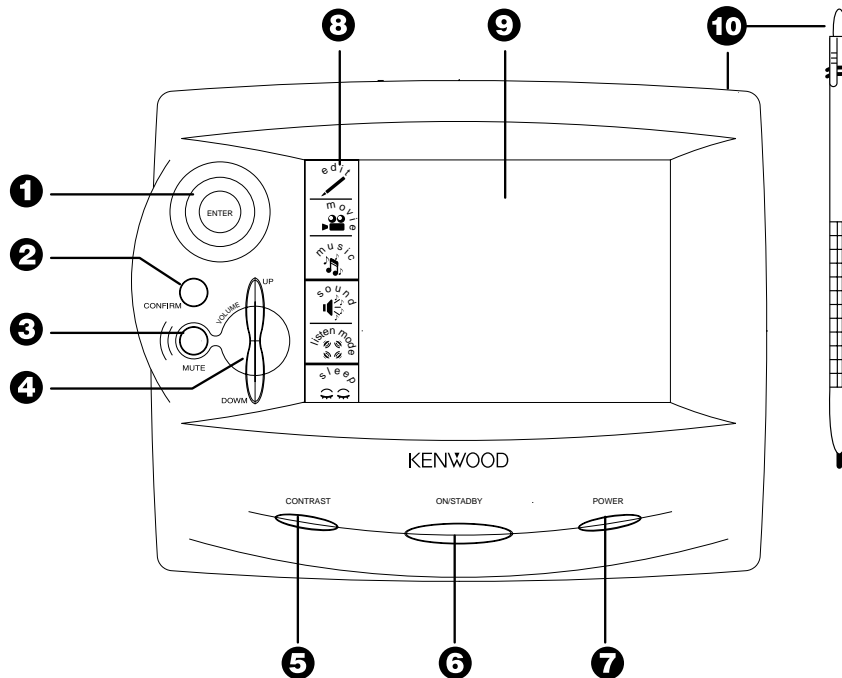
Controls and indicators

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The Graphical Remote Control (GRC) unit provided with the AV CONTROL CENTER can also control KENWOOD cassette decks, CD player, MD recorder and LD player which are connected to it through system control cords. For details of the controllable functions, refer to the instruction manuals of these components.
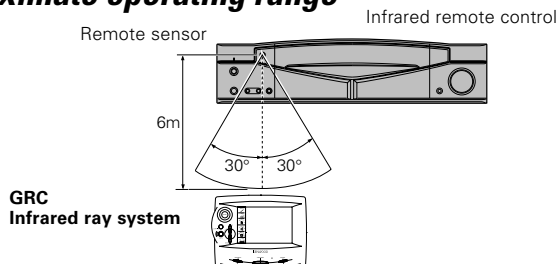
Model: GRC-700
Infrared system

❶ **Joystick** → [14]

❷ **Confirm button** → [14]

❸ **Mute button** → [28]

❹ **Volume up/down button** → [27]

❺ **Contrast button** → [14]

❻ **On/Standby button** → [27]

❼ **Backlight button** → [14]

❽ **Quick Access menu** → [18]

edit	: Editing feature
movie	: Movie device controls such as DVD players or VCRs.
music	: Music device controls such as CD players or the radio tuner.
sound	: Sound controls, such as "midnight" mode.
listen mode	: Listen modes such as stereo, Dolby Digital.
sleep	: Sleep timer

❾ **Touch screen display** → [13]

❿ **Stylus (stored on top edge)** → [13]

Approximate operating range

Remote sensor

Infrared remote control

6m

30° 30°

GRC
Infrared ray system

♪ Notes

1. The supplied batteries are intended for use in operation check. Therefore, their lives may be shorter than ordinary batteries.
2. When the remote-controllable distance gets shorter than before, replace all 6 batteries with new ones.
3. Malfunction may occur if direct sunlight or the light of a high-frequency lighting fluorescent lamp enters the remote sensor. In such a case, change the system installation position to prevent the malfunction.
4. The GRC display may show erroneous information when the GRC unit is operated from outside the specified range.
5. The GRC unit may display incorrect information when the communication is not normal.
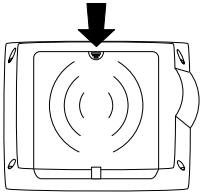   In such a case, press the **CONFIRM** button.

Operation of Graphcal Remote Control

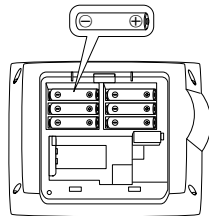**Perform the following procedure after inserting batteries for the first time and every time after changing them.**
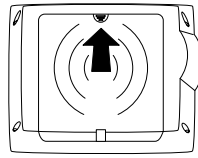

Loading the batteries

Loading batteries

**❶ Remove the cover.**   **❷ Insert batteries.**   **❸ Close the cover.**

Caution in battery replacement

● Insert 6 AA-size batteries as indicated by the polarity marking.
● To maintain the memory of the settings you made before, complete the battery replacement operation within 30 seconds.
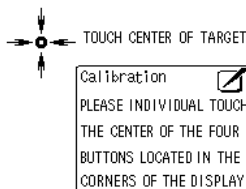

Remote control operation

❼ The touch screen responds to pressure from the included stylus or your finger.
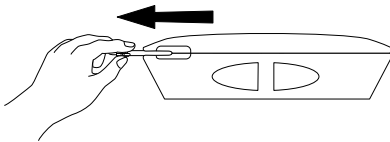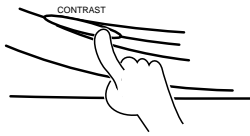

Calibrating the Touch screen

❼ To calibrate the touch screen, use the stylus to touch the center of each of the calibration points displayed.

TOUCH CENTER OF TARGET

Calibration
PLEASE INDIVIDUAL TOUCH
THE CENTER OF THE FOUR
BUTTONS LOCATED IN THE
CORNERS OF THE DISPLAY

● When you touch each calibration point, you should hear a beep and see the next point, indicating that area of the screen is now calibrated. If you do not hear a beep, touch the calibration point until you do.
● The touch screen is sensitive to pressure, not to movement. Press firmly but gently on any touch screen element. The screen will not respond if you simply brush the stylus or your finger along the surface.
● If you are replacing batteries and complete the battery replacement within 3 minutes, you do not need to calibrate the screen; calibration is stored in memory.

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To adjust the contrast

❶ **Press the CONTRAST button until "Contrast" message appears on the screen.**
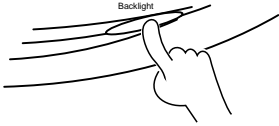
CONTRAST

ENTER

❷ **While this message is displayed, move the joystick up or down to increase or decrease the contrast until you are satisfied.**

❸ **Press ◢ the save the contrast setting and return to the control screen.**

Backlight botton

❶ **To use GRC in the dark, press** BACKLIGHT.

Backlight

❷ **To turn off the light and return to normal display , press** BACKLIGHT **again.**

● Backlight is automatically turned off when GRC goes to "sleep"–you will need to turn it on again when you reactivate GRC.
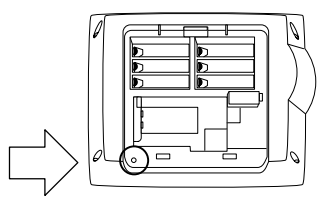
Note **Keep the Back Light turned off during normal use to maximize the life of your batteries.**

Resetting the GRC unit

❶ **Open the cover.**

❷ **Use the stylus to press the blue button at the bottom of the battery case.**

● If you are replacing batteries and complete the battery replacement within 3 minutes, you do not need to calibrate the screen; calibration is stored in memory.
● The setups made by the user are not cleared.

To reset to the factory setup

● While pressing and holding the **CONFIRM** and **VOLUME DOWN** button, use the stylus to press the blue button at the bottom of the battrey case.

Icons

☑ .... **Return to previous display**

☑Main ....**Return to the main menu**

◿ ....**Quit the current display**

◢ ....**Go to the next hierarchy level**

▢ ....**Normal frame**

Setting up the GRC according to other components (Set Up)

In the initial condition, the setup codes for CD, MD and DVD have already been pre-registered. The GRC can also be used to remote control other components which are not connected through system control cords.

In the operations of the GRC (Graphical Remote Control unit), proceed to each step within 10 seconds after the previous step.
The display disappears in 10 seconds.

♫ To resume GRC display, move the Joystick in any directions.

Registering setup codes for VIDEO 1

1 *Enter the setup code.*

❶ Select the "SET UP" icon.

SET UP

❷ Select the "Preference" icon.

Preference

❸ Press the "IR" icon.

IR

❹ Press the "Input" icon to open the list of available jack sets.

Select the icon with △ or ▽.
① CD
② MD/TAPE 1
③ VIDEO 1
④ VIDEO 2
⑤ DVD/DVD 6CH
⑥ TV 1
⑦ TV 2
⑧ TAPE 2/MONI.

❺ Press the "Device" icon to select the type of device you have connected to the jack set.

Select the icon with △ or ▽.

① CD
② TAPE
③ MD
④ VCR
⑤ CABLE
⑥ SATELLITE
⑦ TV
⑧ LD
⑨ DVD
⑩ Nothing

❻ Press the "Brand" icon to select the device's brand.

❼ **Press the "Code" icon. You can now choose from a list of all the codes available for the device. Select the first code on the list.**

❽ **Press the "Check" icon.**

❾ **Press the "Enter" icon.**

Enter

Set up other components in the same way as above.

● When a code which is not shown in the setup code chart is entered, the entered code disappears automatically.
● Even when the system control code is connected, some models may not automatically display the "**System**" screen.
● With CD-Carrousel, select "**Sys-carrousel**".
● When CD, MD and TAPE are connected through system control cords, select "**System**".

Check the operation of the component.

❶ **Display the operation screen of the component to be checked.**
❷ **Turn on the component from the GRC and confirm the actual component.**

● If there is more than one setup code, select the "**Check**" icon. This instructs GRC to send a "Power" test signal to the receiver. If your device turns on, the code you entered was correct. If it does not turn on, try the next code in the list. Continue until one of the codes works.

Note **Although each setup code is designed to work with a number of different models, certain codes may not work with some models. (Also, certain codes may only operate some of the functions available on a given model.) With some models, be sure to keep the Check icon pressed for a while.**

● If the device power cannot be turned ON/OFF, return to ❼ and select the net code in the list.
Repeat ❼ and ❽ until the device power can be turned ON and OFF properly.

Programming remote control functions

Remote control functions of some components may not be available even after the setup codes have been registered. In this case, required functions can be programmed as if the GRC unit "learns" them.
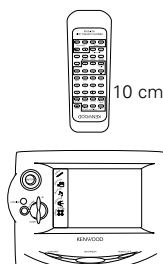
To program STOP as a new control item

❶ **Perform steps ❼ to ❾ in ❼.**
❷ **Press the "Modify" icon.**

Modify

❸ **Select the function to be programmed.**

Learn

❹ **Aim the device's remote at GRC and press and hold the button on the device's remote that corresponds to the command you want GRC to learn.**

10 cm

● This may take a few seconds; do not move GRC or the device's remote until GRC displays the the Function change menu again.
● Be sure to use the device's original remote. GRC will not learn commmands from other universal remotes.

❺ **Repeat steps ❷ through ❹ until you have taught GRC all the commands you want it to know. If you need more lines, touch or to access more lines.**

Programming an additional function which is not displayed in the screen

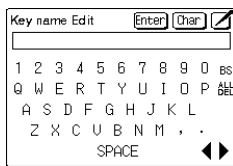❶ **Repeat steps ❶ and ❷ in "To program STOP as a new control item".**   ➡ 16
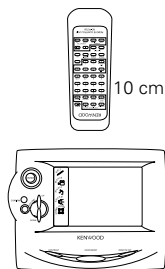❷ **Press the "Modify" icon.**

Modify

❸ **Press the △ or ▽ icon to select one of "Empty 1 to 8".**

❹ **Assign a name to the function.**

Name Input

Key name Edit   Enter Char

1 2 3 4 5 6 7 8 9 0 BS
Q W E R T Y U I O P ALL DEL
A S D F G H J K L
Z X C V B N M , .
SPACE   ◀▶

Enter

Learn

● The name can be composed using up to 8 characters.
● Touch Char to access to lowercase characters. Touch it again to access special characters (such as @, !, &, etc.). Touch it a third time to return to uppercase characters.
● Touch ◀ or ▶ to move back and forth between the characters.
● Touch **BS** (Backspace) to clear the last caracter you entered. Touch **ALL DEL** to delete all the characters in the line.

❺ **Aim the device's remote at GRC and press and hold the button on the device's remote that corresponds to the command you want GRC to learn.**


10 cm

● This may take a few seconds; do not move GRC or the device's remote until GRC displays the Function change menu again.
● Be sure to use the device's original remote. GRC will not learn commmands from other universal remotes.

❻ **Repeat steps ❷ through ❺ until you have taught GRC all the commands you want it to know. If you need more lines, touch or to access more lines.**

● The additionally programmed function is registered in the More area.

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Controlling the AV Control Center

The operations required to remote control the AV Control Center includes the INPUT SELECTOR selection, display mode selection, stereo selection and so on.
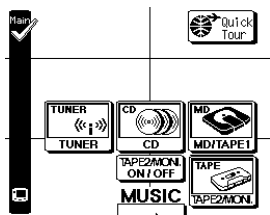The following procedures show how to remote control the basic operations of the GRC.
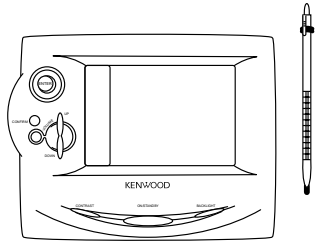
Operation examples

Switching the INPUT SELECTOR (Selecting the CD input)

➊ Select the "music" icon in the Quick access menu.
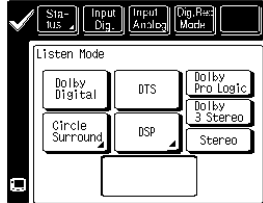
➋ Select the "CD" icon.

➌ The input source is switched to "CD".
● Other input than CD can be selected in step ➋.
● The icon of the registered component is displayed.

Selecting the listen mode (select STEREO)

➊ Select the "listen mode" icon in the Quick access menu.

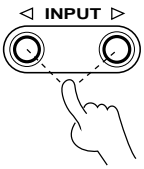**➋ Select the "Stereo" icon.**

● It is also possible to select the Pro Logic, 3 STEREO icon in step ➋.
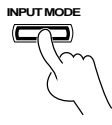
Input mode settings

CD and **DVD** inputs each include jacks for digital audio input and analog audio input.
You must select beforehand which type of input is to be used for each connected component. The initial factory setting is to use the digital audio signal for playback.
To use the analog audio input for playback instead, you must set the input mode for the corresponding input to the analog mode.
After completing connections and turning on the AV control center, follow the steps below.

Main unit	GRC

➊ Use the INPUT SE-LECTOR key to select CD or DVD.
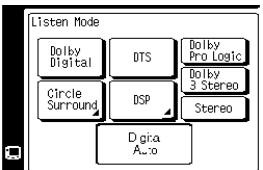
◁ INPUT ▷

Input Dig. or Input Analog

**➋ Press the INPUT MODE key.**

INPUT MODE

Digital input:
Select this setting to play digital signals from a DVD, CD, or LD player.
Analog input:
Select this setting to play analog signals from CD,DVD.
Auto sound:
In the auto sound mode (**AUTO SOUND** indicator lights), the AV control center selects the listening mode automatically during playback to match the type of input signal (Dolby Digital, PCM, DTS) and the speaker setting. The initial factory setting is auto sound on. To keep the receiver set to the currently selected listening mode, use the **INPUT MODE** key to select "**DIGITAL MANUAL**" (manual sound). However, even when this setting is selected, there may be cases in which the listening mode is selected automatically to match a Dolby Digital source signal depending on the combination of listening mode and source signal.

Each press switches the setting as follows:
In DTS play mode
➊ **DIGITAL AUTO** (digital input, auto sound)
➋ **DIGITAL MANUAL** (digital input, manual sound)

In other mode than DTS play mode
➊ **DIGITAL AUTO** (digital input, auto sound)
➋ **DIGITAL MANUAL** (digital input, manual sound)
➌ **ANALOG** (analog input, manual sound)

● With **DIGITAL MANUAL**, the audio may sometimes be not output when the signal is switched.

Controlling the components connected through system control cords

When a CD player, MD recorder, cassette deck and/or DVD player are connected with the AV CONTROL CENTER through system control cords, their system control operations are possible from the GRC.
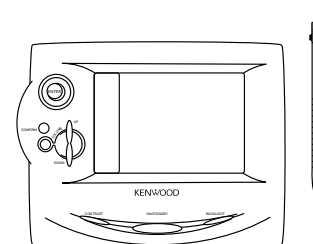
Preparations
● System control connection ➜ 8
● Setup of source components ➜ 15

Select the "music" icon in the Quick access menu.

Operating the tuner

❶ **Select the "music" icon in the fixed segment screen.**
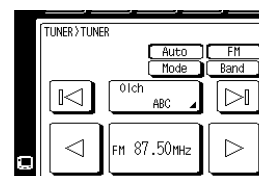(Select the icon)

m u s i c

❷ **Select the "TUNER" icon**

TUNER
《¡》
TUNER

Display the tuner operation menu.

❸ **Select the icon to be operated.**

● Any of the keys which can control the tuner can be selected.

Operating the CD player

❶ **Select the "music" icon in the fixed segment screen.**
(Select the icon)

m u s i c

❷ **Select the "CD" icon.**

CD
CD

Display the CD operation menu.

❸ **Select the icon to be operated.**

● The illustration shows the single CD operation menu.
● Any of the CD player operation keys can be selected.
● For the operation of the CD player, also read the instruction manual of the CD player.

Operating the MD recorder

❶ **Select the "music" icon in the fixed segment screen.**
(Select the icon)

m u s i c

❷ **Select the "MD/TAPE 1" icon.**

MD
MD/TAPE1

Display the MD recorder operation menu.

❸ **Select the icon to be operated.**

● Any of the MD recorder operation keys can be selected.
● For the operation of the MD recorder, also read the instruction manual of the MD recorder.

Operating the cassette deck

❶ **Select the ″music″ icon in the fixed segment screen.**
(Select the icon)

ᵐᵘˢⁱᶜ
♪♫

❷ **Select the ″MD/TAPE 1″ icon.**

TAPE
MD/TAPE1

Display the cassette deck operation menu.

❸ **Select the icon to be operated.**

● Any of the cassette deck operation keys can be selected.

● For the operation of the cassette deck, also read the instruction manual of the cassette deck.

Select the ″movie″ icon in the Quick access menu.

Operating the DVD player

❶ **Select the ″movie″ icon in the fixed segment screen.**
(Select the icon)

ᵐᵒᵛⁱᵉ

❷ **Select the ″DVD/6CH.″ icon.**

DVD
DVD/6CH

Display the DVD player operation menu.

❸ **Select the icon to be operated.**

● Any of the DVD player operation keys can be selected.
● For the operation of the DVD player, also read the instruction manual of the DVD player.

Operating the LD player

❶ **Select the ″movie″ icon in the fixed segment screen.**
(Select the icon)

ᵐᵒᵛⁱᵉ

❷ **Select the ″LD″ icon.**

LD
DVD/6CH

Display the LD player operation menu.

❸ **Select the icon to be operated.**

● Any of the LD player operation keys can be selected.

● For the operation of the LD player, also read the instruction manual of the LD player.

Controlling the other components

Operating the Video cassette recorder

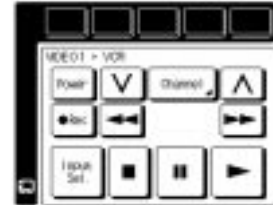❶ **Select the "movie" icon in the fixed segment screen.**
  (Select the icon)

❷ **Select the "VIDEO 1" icon.**

Display the Video cassette recorder operation menu.
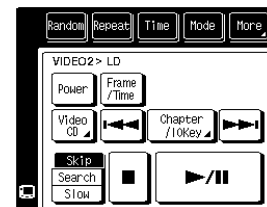
❸ **Select the icon to be operatwed.**

● Any of the Video operation keys can be selected.

● For the operation of the Video cassette recorder, also read the instruction manual of the Video cassette recorder.

Examples of component operation menus
The operation menus are variable depending on the connected components.

Operating the LD

Operating the TV

Operating the CABLE

Operating the SATELLITE

Operating the LD player (Non Kenwood)

One-touch operation features (Main unit only)

(CD player, cassette deck (Single deck only), DVD player)

When the system is in standby mode, the operations as described below are possible provided that the associated components are connected through system control cords.

Preparations

❶ Ensure that system control cords are connected.
❷ Load the source component with the software to be played.
❸ Press the I/⏻ (ON/STANDBY) key of the AV CONTROL CENTER to put it to standby mode.

● The STANDBY indicator lights in the STANDBY mode.

Function available with the play key operation

❶ Press the play key.
❷ The system is switched from standby mode to ON mode.
❸ The input selector is switched automatically.
❹ Playback starts.

● CD player and cassette deck.

Easy operation feature

The operations as described below are possible provided that the associated components are connected through system control cords.

Operation available by switching the input selector

❶ Select the desired input with the input selector.
❷ The selected source component starts to play.

● Turn on the system before switching the input selector.

● Select the source component with the **INPUT SELECTOR**.

Speaker settings

Setup for surround play (SET UP)

The feeling of presence in the surround effects can be improved by performing the following adjustment procedure according to the speaker system and listening room environment in use.
Once they are adjusted, re-adjustment is not necessary even after the surround mode is switched to other modes.
When the SERIES 21 speakers are used, the settings in steps **1** and **2** are not necessary.

Select the speaker setup mode

1 *Select the speaker setup mode.*

GRC

❶ Select the "music" or "movie" icon in the fixed segment screen.

music   or   movie

❷ Select the "Main" icon .

Main

❸ Enter the setup mode.
(Select the icon)

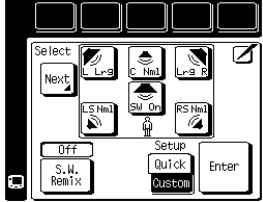SET UP

Surround

Setup Surround
SP Selection
SP Distance
SP Level
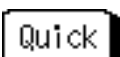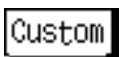
❹ Select "SP Selection" icon.

SP Selection

❺ Select "Quick" or "Custom" icon.

Quick   or   Custom

❻ Select the item to be adjusted.
(Select the icon)

Select
Next   L-g   C Nml   L-g R
      LS Nml   Sw On   RS Nml
Off   Setup
S.W.   Quick   Enter
Remix   Custom

① **Quick Setup** : Use this method for a simplified setup where you identify whether a speaker is present and let the receiver automatically determine the appropriate speaker settings.

② **Custom Setup**: Use this method for a more customized setup where you determine more of the speaker settings, such as the bandwidth of the sound sent to each speaker.

Main unit

Each press of the **SETUP** key switches the adjustment items as shown below. Each press **MULTI CONTROL LEVEL** ∨ or ∧ key switches the indication.

"SUBW" .... Sub-woofer ON/OFF setting.
"REMIX"*1 .... Sub-woofer remix ON/OFF setting.
"FRNT"*2 .... Front speaker setting.
"CNTR" .... Center speaker setting.
"SURR" .... Surround speaker setting.
TEST TONE .... Test tone output.
FRONT DISTANCE .... Front speaker distance.
CENTER DISTANCE .... Center speaker distance.
SURROUND DISTANCE .... Surround speaker distance.
End of SET UP

*1, *2 This setting is not available if "**SW Off**" is selected in the above.

● After adjusting the speaker size and ON/OFF setting, be sure to perform "**Adjust the speaker level**" ➔ 25 using the test tone described in step **4**.

2 *Select a speaker system.*

GRC

➊ Set up the subwoofer. "SW"

(Select the icon)

SW On

➋ Select On or Off.

Each press changes the setup.
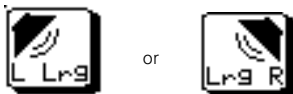
➌ Set up the subwoofer remix. "Remix"

(Select the icon)

S.W.
Remix

➍ Select On or Off.

Each press changes the setup.

➎ Set up the front speaker size. "FRNT (L/R)"

(Select the icon)

L Lrg   or   Lrg R

➏ Select Nml or Lrg.

Each press changes the setup.

➐ Set the center speaker size. "CNTR (C)"

(Select the icon)

C Nml

➑ Select Lrg, Nml or Off.

➒ Set the surround speaker size. "SURR (LS/RS)"

(Select the icon)

LS Nml   or   RS Nml
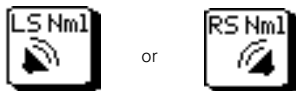
➓ Select Lrg, Nml or Off.

⓫ Select the "Enter" icon.

Enter

⓬ Select the "Next" icon.

Next

GRC

Quick setup

SW Yes : Subwoofer on
SW No : Subwoofer off

Custom setup

SW On : Subwoofer on
SW Off : Subwoofer off

● When the setting "**SW Off**" is selected, the front speakers automatically are set to "**Lrg**" and the procedure skips to step ➐.

SW Remix On : Subwoofer remix on
SW Remix Off : Subwoofer remix off

● This setting is not available if "**SW Off**" is selected in the above.
● Only the Custom setup can be set.
● If you selected "On" for the subwoofer, all of the bass below 80Hz is removed from other speakers in your system and is sent to the subwoofer in all listening modes.

L/R Nml (normal)
: Average size front speakers are connected to the AV control center.

L/R Lrg (large)
: Large front speakers are connected to the AV control center.

● When "**SW**" is set to ON and "**L/R**" is set to "**Nml**", "**C**" and "**LS/RS**" are set to automatically "**Nml**".

C Lrg : A large center speaker is connected to the AV control center.
C Nml : An average size center speaker is connected to the AV control center.
C Off : No center speaker is connected to the AV control center.

● When "**SW**" is set to ON and "**L/R**" is set to "**Nml**", "**C**" and "**LS/RS**" are set to automatically "**Nml**".
● When "**C**" is set to "**Nml**" or **Off**, "**LS/RS**" is automatically set to "**Nml**" or **Off**.

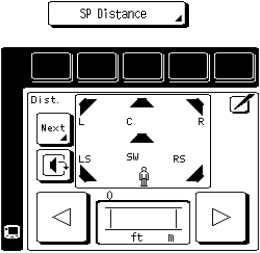**LS/RS Lrg** : Large surround speakers are connected to the AV control center.
LS/RS Nml : Average size surround speakers are connected to the AV control center.
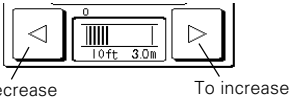**LS/RS Off** : No surround speakers are connected to the AV control center.

3 *Set the speaker distance.*

GRC

❶ Measure the distance from the listening position to each of the speakers.

❷ Select a speaker distance.
(Select the icon)

SP Distance

❸ Set "SP Distance".
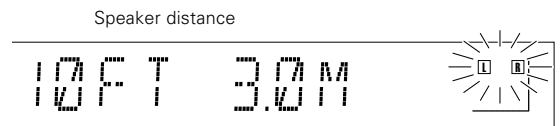(Select the icon)

To decrease   To increase

❹ Touch ⬛ to select the speaker.

❺ Repeat steps ❸ and ❹ for each speaker.

❻ Press the "Next" icon.
(Select the icon)

Next

Jot down the distance from the listening position to each of the speakers

FRONT (L/R)	:	meter(s)
CENTER (C)	:	meter(s)
SURROUND (LS/RS)	:	meter(s)

Speaker distance

10FT 3.0M

● The allowable setting range is 1 to 30 feet (0.3 to 9.0 m), adjustable in 1 foot (0.3 m) increments.
● The speakers you selected appear on the display. Confirm that all the speakers have been correctly selected.

4 *Adjust the speaker level.*

GRC

❶ Select a speaker level.
(Select the icon)

SP Level

❷ Select "Test Tone" icon.
(Select the icon)

Test Tone

● The test tone which sounds like noise move across speakers in the following sequence about 2 seconds.

TEST Lch	(Front speaker, Left)
TEST Cch	(Center speaker)
TEST Rch	(Front speaker, Right)
TEST RSch	(Surround speaker, Right)
TEST LSch	(Surround speaker, Left)
TEST SWch	(Subwoofer)

● Even when "**Test Tone**" is "**Off**", it is possible to select the speaker with the ⬛ or ⬛ icon and adjust its level with the ◁ or ▷ icon.

GRC

❸ **Adjust the levels of all the speakers than the front speakers (left, right).**

While test tone is output from a speaker, adjust the volume level of the speaker.
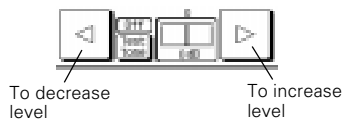
(Select the icon)

To decrease level / To increase level

❹ **Repeat ❸ until all the system's speakers (except the subwoofer) play at the same volume.**

❺ **Press the "Test Tone" icon.**
(Select the icon)

Test Tone

● The test tones is not output from the speaker which has been set to off. "**Speaker settings**"   ➔ 23

Ccht 10dB

Display when test tone is output from a surround speaker

● Be sure to adjust from the listening position.
● Each press of the key increases or decrease the level by 1 dB.
● To set the subwoofer level, listen to familiar music or films that have strong bass content and adjust the subwoofer level until it sounds balanced with the rest of the speakers.
● When the volume level is increased during the "**Test Tone**" operation and it is finished while the volume level is high, the increased volume level will be maintained.

5 *Adjust the input level. (analog sources only)*

GRC

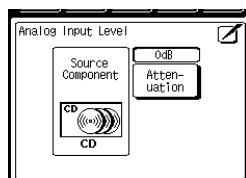❶ **Select the "music" or "movie" icon in the fixed segment screen.**

music   or   movie
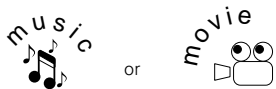
❷ **Select the "Main" icon .**

Main

❸ **Enter the SETUP mode.**
(Select the icon)

SET UP

❹ **Select the "Input" icon.**
(Select the icon)

Input

Analog Input Level

Source Component   0dB   Atten-uation

CD

CD

❺ **Select the "Attenuation" icon.**
(Select the icon)

Atten-uation

If the input level of an analog source signal is too high or the AV control center's **CLIP** indicator lights, adjust the input level.

CLIP

If the **CLIP** indicator lights with analog input, set the input level to -3 or -6 dB to avoid sound distortion.

● This adjustment is not available with **DVD 6ch INPUT**.
● This adjustment is not available when the input mode is DIGITAL.
● The selected input level can be stored in memory on a per-selector basis.

Input level

INPUT -6
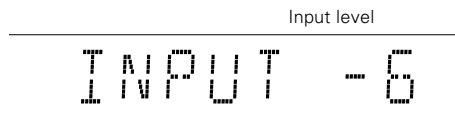
Each press changes the level.

① **0 dB**
② **-3 dB**
③ **-6 dB**

To quit the SETUP mode

GRC

Press the ✐ icon.

Playing music

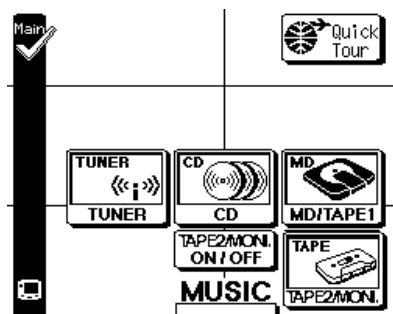**The following procedure allows to play a MD,CD or cassette tape.**

Preparations

- Connect components as described in "**System connection**".
  → 5
- Complete "**Setup of the Graphical Remote Control (GRC) unit**".
  → 12

---

1 Press the ON/STANDBY key to ON.

| Main unit | I/⏻ | GRC |

ON/STANDBY

- Load the CD player or cassette deck with the software to be played.
  ➡Read the instruction manuals of the associated components.

2 Select the input source.

| Main unit | GRC |

(Select the icon)

◁ INPUT ▷

music

CD or MD/TAPE1

- Step **3** can be omitted if the easy operation feature is available.
  "**Easy operation feature**" → 22

With the main unit operation, the input sources are switched as shown below.

- ① **TUNER (frequency display)**
- ② **CD**
- ③ **MD/TAPE 1**
- ④ **DVD/DVD 6ch INPUT *1**
- ⑤ **VIDEO 1**
- ⑥ **VIDEO 2**

The selected source is displayed.

CD

> **Pressing and holding the AUTO key for more than 2 seconds allows the source to be switched as shown below.**
>
> ***1: To change the DVD display to DVD 6ch INPUT or LD display**
>
> To enable system-control operation, the displayed information should be set according to the actually connected components. → 10

3 Play the selected source.

| Main unit | GRC |

(Select the icon)

CD   **MD**

or

Operation on each source component

►/‖   ►

4 Adjust the volume.

| Main unit | GRC |

VOLUME CONTROL

◁   ▷

DOWN   UP

To decrease volume   To increase volume

VOLUME UP — To increase volume
DOWN — To decrease volume

Volume level is displayed.

VOL-50dB

- Rotating the **VOLUME CONTROL** at a higher speed increases the amount of volume change (AI VOLUME function).
- The sound of input source cannot be listened to while **TAPE 2/ MONITOR** is ON. → 28

To listen through headphones

❶ Plug headphones.

PHONES

❷ Adjust the volume.

| Main unit | | GRC |

VOLUME CONTROL

◁ ▷

DOWN **UP**

To decrease volume

To increase volume

VOLUME UP —— To increase volume

DOWN —— To decrease volume
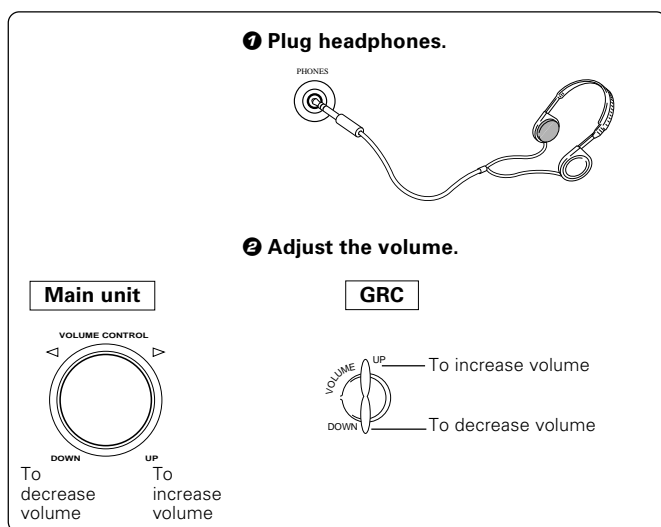
● The speaker sound is defeated at the moment headphones are inserted into the **PHONES** jack.
● If headphones are plugged in during surround play, its mode is automatically switched to the **STEREO** mode.
  If they are plugged in during **DVD 6ch INPUT** play, only the front L ch and R ch will be played.
  The previous status resumes at the moment headphones are un-plugged.
● If headphones are plugged in during test tone output, the test tone output stops.

To mute sound temporarily

| GRC |

MUTE

| Main unit |

MUTE

Blinks
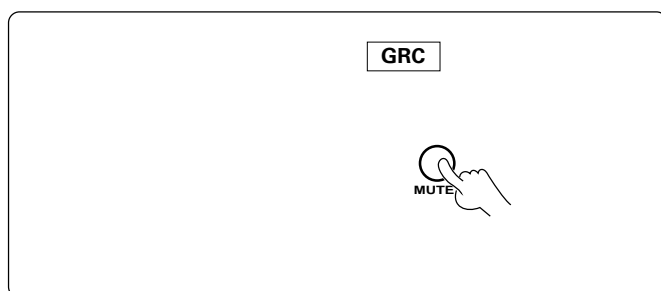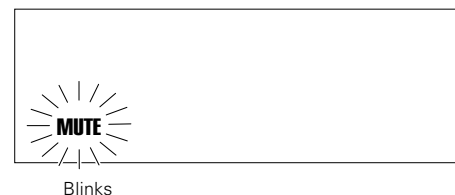
To cancel
Press the MUTE key again.

Notes for using the CD, DVD or DVD 6ch INPUT source
When **CD**, **DVD** or **DVD 6ch INPUT** is selected as the input source, the operation is subjected to the following restrictions.
Restrictions with CD and DVD:
  1. When the input is a digital signal, the **TAPE2/MONITOR** function cannot be used.

Restrictions with DVD 6ch INPUT (except with the ANALOG input) :
  1. The monitor function cannot be activated by pressing the **TAPE 2/MONITOR** key.
  2. The Listen mode operations are not available.

● The speaker setting is not available with **DVD 6ch INPUT**.
● The sound adjustment is not available with **DVD 6ch INPUT**.
● When **DVD 6ch INPUT** is selected, all the speaker levels become 0 dB so the levels should be set on the source component.

Regarding TAPE 2/MONITOR
A cassette deck or graphic equalizer can be connected to this unit's **TAPE 2/MONITOR** terminals. If you connect a graphic equalizer, turn the **TAPE 2/MONITOR** key ON. If you connect a 3-head cassette deck, you can monitor the source sound, or the sound being recorded, while recording. Pressing the **TAPE 2/MONITOR** key lets you compare the recorded sound and the source sound. Refer to the operating manual for the component you connected for further details.

Sound adjustment

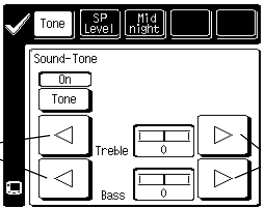## Ajustment for surround play *(while listening to music) (SOUND)*

1 Adjusting the tone (Stereo status only)

GRC

❶ Enter the SOUND adjustment mode.
(Select the icon)

sound 🔊

❷ Select the "Tone" icon.
(Select the icon)

[Tone]

To decrease → ← → To increase

❸ Touch [Tone] **to turn the tone setting on or off.**
This adjustment is possible only when the PCM or Analog input is used and the listen mode is set to STEREO.

❹ Touch the left [◁] **or right arrow** [▷] **next to a tone setting (treble or bass) to adjust it. A readout** [▯] **between the arrows shows the current setting.**

Main unit

Each press of the **SOUND** key switches the indication.

- ① **BASS** : Tone, Bass
- ② **TREBLE** : Tone, Treble
- ③ **C** : Center speaker
- ④ **LS/RS** : Surround speaker, Left/Right
- ⑤ **SW** : Sub woofer
- ⑥ **MIDNIGHT**

● Adjustments ① and ② are not available in other modes than STEREO and "**Tone**" is set to "**On**".
● Adjustments ③, ④ and ⑤ are available only when the corresponding speakers are set.
● The tone adjustment is not available with **DVD 6ch INPUT**. → [28]
● With the GRC, the adjustment items shown in a single menu can be adjusted at once. (The adjustment steps ①, ② are provided in a single menu so they can be adjusted successively without changing the menu screen.)
● ⑥ is available only with the Digital input.

🎵 Note
The display on the GRC disappears if no operation on the GRC has been pressed for about 7 seconds.

Bass tone level

BASS -2

● The level can be adjusted between -10 and +10 in step of 2.

Treble tone level

TREB +2

● The level can be adjusted between -10 and +10 in step of 2.

2 Adjust the volume levels for the speakers. (In other modes than stereo)

❶ Select the "SP Level" icon.
(Select the icon)

[SP Level]

To increase →
To decrease →

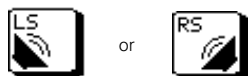● This adjustment is not available when **DVD 6ch INPUT** is selected.

❷ Adjust the center speaker level. "C"
(Select the icon)

❸ Adjust to the desired level by pressing keys △ and ▽

❹ Adjust the surround speaker level. "LS/ RS"
(Select the icon)

 or

❺ Adjust to the desired level by pressing keys △ and ▽

❻ Adjust the subwoofer level. "SW"
(Select the icon)

❼ Adjust to the desired level by pressing keys △ and ▽

| Main unit |

center speaker level

● The level can be adjusted between -10 and +10 in step of 1.

Surround speaker level

● The level can be adjusted between -10 and +10 in step of 1.

Sub woofer level

● The level can be adjusted between -10 and +10 in steps of 1.

● The volume levels adjusted here are just temporary; they return to the levels originally set in the setup operation when the power is turned off, the input selector is switched or the setup operation is started.

MIDNIGHT function

❶ Select the "Midnight" icon.
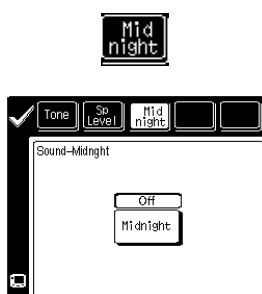
❷ Select the MIDNIGHT mode.
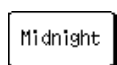
MIDNIGHT function
Any time you don't want to experience the loud and soft volume extremes of recorded sound (for example, late at night), use MIDNIGHT function to reduce volume extremes. This feature keeps loud, dramatic sound from being too loud (perhaps disturbing family members or neighbors) while ensuring that you can still hear whispered dialog or other soft sounds. Midnight function only works if you are listening to a Dolby Digital program that has been encorded with special compression data.

Each press changes the mode.
① **1 ... For quieter balancing.**
② **2 ... For quietest balancing (the least difference between the loudest and quietest sound).**
③ **OFF**

Recording

When recording sound with a recorder component of KENWOOD, synchro recording is possible by setting the INPUT SELECTOR to select MD or TAPE 1 according to the connected component.

> Sound may not be reproduced when the input signal and LISTEN MODE are selected improperly.
> How to select the digital input, analog input and LISTEN MODE. → 53
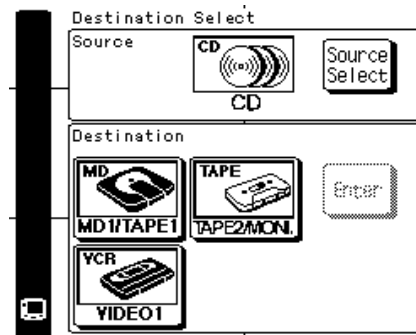
Recording an analog input source
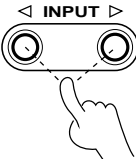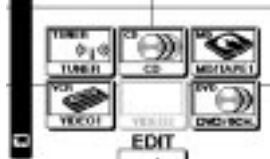
1 To record a music source

Main unit	GRC

❶ **Select the "edit" icon in the fixed segment screen.**
(Select the icon)

edit

❷ **Select the source to be recorded.**
Select an input source other than **MD/TAPE 1**.

◁ INPUT ▷

EDIT

CD

❸ **Select the "Distination".**

MD/TAPE1

Enter

❹ **Press the "Src." icon.**

Src.
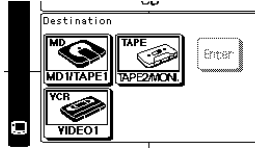
Main unit

Each press switches the indication.
→ ① **TUNER (Frequency display)**
   ② **CD**
   ③ **MD/TAPE 1**
   ④ **DVD/DVD 6ch INPUT**
   ⑤ **VIDEO 1**
→ ⑥ **VIDEO 2**

GRC

Select the icon of the source to be played.

● For the recording using a cassette deck or MD recorder, read the instruction manual of the cassette deck or MD recorder.

2 *Select the ANALOG input mode.*

Main unit	GRC

INPUT MODE

❼ **Set the input mode to ANALOG.**
(Select the icon)

Input
Analog

3 *Start recording.*

Main unit	GRC

❼ **Play the source to be recorded.**

Edit Src. = CD

Power

◄◄   ▤   00   ►►►
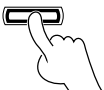
Skip
Search   ■   ►/Ⅱ

❷ **Press the "Dst." icon.**

Dst.

Edit Dst. = MD

Power

●Rec   ◄◄   ▤   00   ►►►

Skip
Search   ■   Ⅱ   ►

❸ **Press the record key to enter record-pause mode.**
❹ **Press the "Src." icon.**

Src.

❺ **Pause the playing the source from beginning of the track being recorded.**

Edit Src. = CD

Power

◄◄   ▤   00   ►►►

Skip
Search   ■   ►/Ⅱ

❻ **Play the source and start recording.**

Main unit

Each press switches the indication.
- ① **DIGITAL AUTO**
- ② **DIGITAL MANUAL**
- ③ **ANALOG**

GRC

Select the icon of the source to be played.

● The switching is not available when the **DVD 6ch INPUT** is selected.
→ 28
● "③ **ANALOG**" cannot be selected when the input signal is the **DTS** signal.
● Each press of Src. or Dst. switches the display between "**Source**" and "**Destination**" alternately.
● The input mode cannot be changed during recording.
● Setting ❼ is not necessary unless when the **CD** or **DVD** source is selected.

● The synchro recording function is not available when the playback source is the DVD player.

When recording sound with a recorder component of KENWOOD, synchro recording is possible by setting the INPUT SELECTOR to select MD or TAPE 1 according to the connected component.

Sound may not be reproduced when the input signal and LISTEN MODE are selected improperly.
How to select the digital input, analog input and LISTEN MODE.   → 53

Recording a digital input source (CD,DVD)
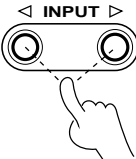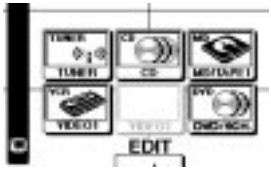
1 To record a music source

Main unit	GRC

❶ **Select the "edit" icon in the fixed segment screen.**
(Select the icon)

edit

❷ **Select the source to be recorded.**
Select an input source other than **MD/TAPE 1**.

◁ **INPUT** ▷

CD
CD

❸ **Select the "Distination".**

Destination

MD/TAPE1

Enter

❹ **Press the "Src." icon.**

Src.

Main unit

Each press switches the indication.

➀ **TUNER (Frequency display)**
➁ **CD**
➂ **MD/TAPE 1**
➃ **DVD/DVD 6ch**
➄ **VIDEO 1**
➅ **VIDEO 2**

GRC

Select the icon of the source to be played.

● For the recording using a cassette deck or MD recorder, read the instruction manual of the MD recorder or cassette deck.

2 Set the input mode to DIGITAL AUTO (MANUAL).

| Main unit | GRC |

INPUT MODE

❶ **Set the input mode to "DIGITAL AUTO (MANUAL)".**

(Select the icon)

Input Dig.

| Main unit |

Each press switches the indication.
- ① **DIGITAL AUTO**   Input signal is detected automatically.
- ② **DIGITAL MANUAL**   Selected input signal is held.
- ③ **ANALOG**

| GRC |

- ① **DIGITAL AUTO**   Input signal is detected automatically.
- ② **DIGITAL MANUAL**   Selected input signal is held.

● The switching is not available when the **DVD 6ch INPUT** is selected.
  ↪ 28
● "③ **ANALOG**" cannot be selected when the input signal is the **DTS** signal.
● Each press of ⌐Src.⌐ or ⌐Dst.⌐ switches the display between "**Source**" and "**Destination**" alternately.

3 Select the DIGITAL REC mode.

AUTO REC MODE

| Main unit |

DIGITAL REC

❶ **Set the REC mode to "AUTO REC MODE".**
❷ **Put the cassette deck (MD recorder) in record-pause mode.**

MANUAL REC MODE

| Main unit |

DIGITAL REC

Method 1

❶ **Play the source to be recorded.**
❷ **Set the input mode to "MANUAL REC MODE".**
❸ **Apply decoding that matches the input signal from the source selected and played in "❶" above.**

Method 2

❶ **Set the input mode to "MANUAL REC MODE".**
❷ **Play the source to be recorded.**
❸ **If audio is not output, switch the decoder by pressing the LISTEN MODE key.**

| Main unit |

Each press switches the indication.
- ① **REC MODE OFF**   Off
- ② **AUTO REC MODE**
- ③ **MANUAL REC MODE**

> Switch on the REC MODE to record a digital input source.
> Usually use the AUTO REC MODE to record audio input sources.
> When the digital mode changes during recording in the AUTO REC MODE, the audio may be interrupted momentarily. To record the audio from the beginning of the digital mode change, use the MANUAL REC MODE.

● The input is automatically down-mixed to 2 channels.
● Recording is not available when the **DVD 6ch INPUT** is selected. ↪ 28

● The **EON** overriding does not occur during recording.
● For the recording using a cassette deck or MD recorder, read the instruction manual of the cassette deck or MD recorder.

● The **LISTEN MODE** key can be used to switch the decoder only when the **MANUAL REC MODE** is selected.
● Sound may not be reproduced when the input signal and LISTEN MODE are selected improperly.
 How to select the digital input, analog input and LISTEN MODE. ↪ 53

GRC

➊ **Select the "edit" icon in the fixed segment screen.**
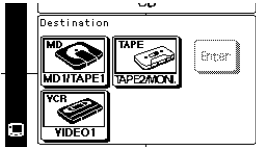(Select the icon)

edit

➋ **Select the source to be recorded.**
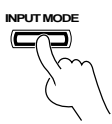Select an input source other than **MD/TAPE 1**.

EDIT

CD

➌ **Select the "Distination".**

Destination

MD/TAPE1   CD2/TAPE2   Enter

VIDEO1

MD/TAPE1

Enter

➍ **Press the "Src." icon.**

Src.
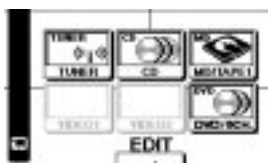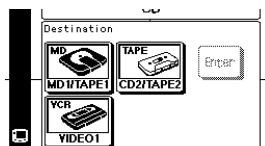
➎ **Set the REC mode to "Dig. Rec Mode.".**
(Select the icon)

Dig. Rec Mode

➏ **Play the source to be recorded.**

➐ **Press the "Dst." icon.**

Dst.

➑ **Press the record key to enter record-pause mode.**

GRC

Select the icon of the source to be played.

● For the recording using a cassette deck or MD recorder, read the instruction manual of the MD recorder or cassette deck.
● The input is automatically down-mixed to 2 channels.
● Recording is not available when the **DVD 6ch INPUT** is selected. ➜ 28

GRC

① **REC MODE OFF**   Off
② **AUTO REC MODE**
③ **MANUAL REC MODE**

Switch on the REC MODE to record a digital input source. Usually use the AUTO REC MODE to record audio input sources. When the digital mode changes during recording in the AUTO REC MODE, the audio may be interrupted momentarily. To record the audio from the beginning of the digital mode change, use the MANUAL REC MODE.

● The switching is not available when the **DVD 6ch INPUT** is selected.
  ➜ 28
● ③ cannot be selected when the input signal is the **DTS** signal.
● Each press of Src. or Dst. switches the display between "**Source**" and "**Destination**" alternately.

● If audio is not output, switch the decoder by pressing the **LISTEN MODE** key.

4 *Start recording.*

| Main unit | GRC |

❶ **Press the "Src." icon.**

❷ **Pause the playing the source from beginning of the track being recorded.**

❸ **Play the source and start recording.**

Listening to radio broadcasts

Radio stations can be classified into RDS (Radio Data System) stations and other stations. For listening to RDS stations or storing RDS stations in preset memory, see section entitled "Functions of RDS".
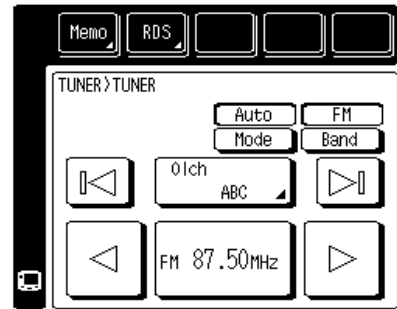
Tuning radio stations

1 Select the TUNER input.
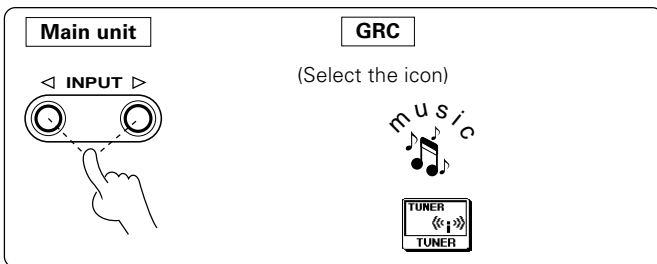
Main unit	GRC
◁ INPUT ▷	(Select the icon) music

Main unit

Each press switches the indication.

① **TUNER (Frequency display)**
② **CD**
③ **MD/TAPE 1**
④ **DVD/DVD 6ch**
⑤ **VIDEO 1**
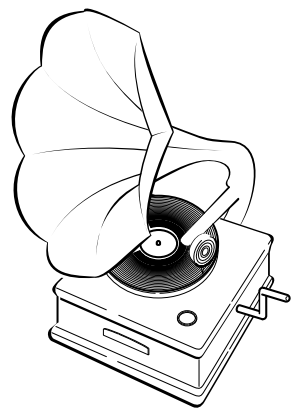⑥ **VIDEO 2**

Frequency display

`89.00` MHz
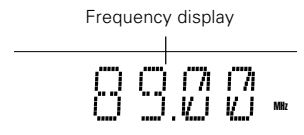
● The previously tuned frequency is displayed.

2 Select the broadcast band.

Main unit	GRC
JTO BAND	(Select the icon) Band

Main unit

Each press switches the indication.

① **FM**   ① **FM (Australia only)**
② **MW**   ② **AM (Australia only)**
③ **LW**

FM `89.00` MHz

Lights up

3 Select the tuning method.

Main unit	GRC
A.MEMO AUTO BAND	(Select the icon) Mode

Each press switches the indication.

Main unit

① **AUTO** lit (auto tuning)
② **AUTO** not lit (manual tuning)

AUTO

Lights up

GRC
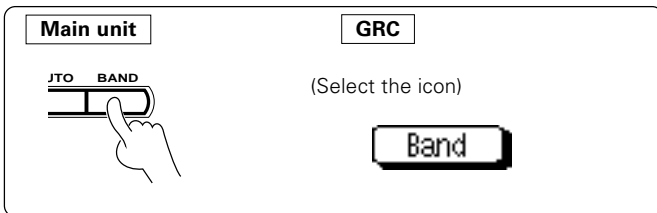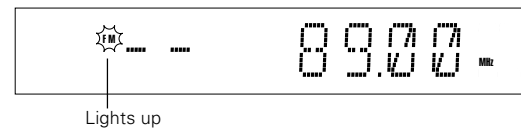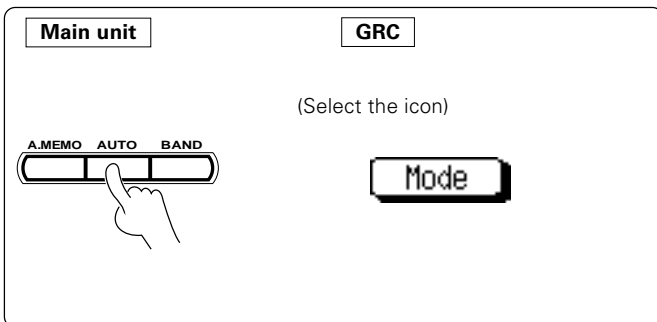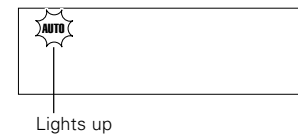
① **Auto** (auto tuning)
② **Manual** (manual tuning)

● Normally, set to "**AUTO**" (auto tuning). If the radio waves are weak and there is a lot of interference, switch to manual tuning. (With manual tuning, stereo broadcasts will be received in monaural.)

4 Select a station.

Main unit	GRC
To increase frequency PTY SELECT ∨ TUNING ∧ To decrease frequency	(Select the icon) To increase frequency ◁ FM 87.50MHz ▷ To decrease frequency

---

Frequency display

AUTO TUNED `89.00` MHz
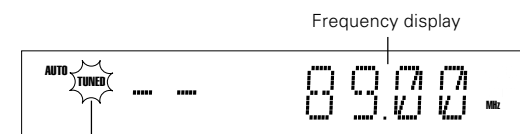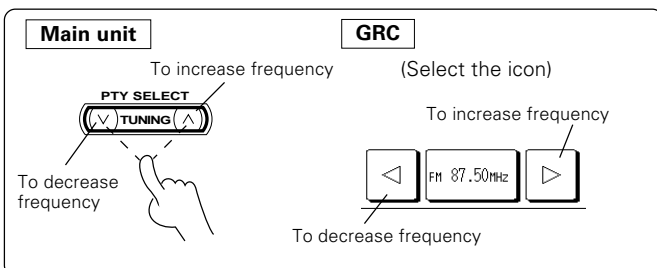
"TUNED" lights up when a station is tuned.

Auto tuning : The next station found is tuned automatically.

Manual tuning : Press and hold the key until the desired station is received.

Functions of RDS *(Radio Data System)*

RDS is a system which transmits useful information (digital data) for FM broadcasts together with the broadcast signal. Tuners and receivers designed for RDS reception can extract the information from the broadcast signal for use with various functions such as automatic display of the station name.

Functions made possible with RDS

PTY (Program Type Identification) Search :
The tuner automatically searches for a station which is currently broadcasting a specified program type (genre).   → 43

EON (Enhanced Other Network) reservation
By selecting one of the two kinds of program previously, the tuner switches automatically to a station broadcasting that kind of program whenever it starts broadcasting. When the broadcasting completes, the tuner returns automatically to the originally-received station. → 45

PS (Program Service Name) display : See figure ① below.
When an RDS broadcast is received, the station name is automatically displayed.

RT (Radio Text) display :See figure ② below.
Some of the RDS stations also transmit text data.
When the RT display is selected with the **RT** key, the broadcast text is scrolled on the display.

AUTO MEMORY
This function automatically selects the stations providing RDS and FM broadcasting and stores them in the preset memory (up to 40 stations can be preset).   → 40

The **RDS** indicator lights up when an RDS broadcast (signal) is received.
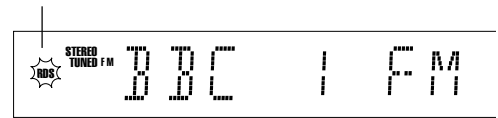
● Some functions may not be provided or be given different names depending on countries or areas.
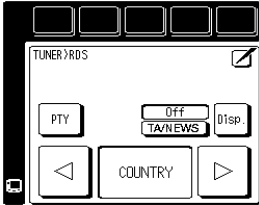
Before using a function utilizing the RDS, be sure to perform the AUTO MEMORY operation by referring to the description in "Presetting RDS stations (AUTO MEMORY)".
→ 40

RDS DISPLAY key

Main unit	GRC

(Select the icon)

Pressing the **RDS DISPLAY** key changes the display contents.

Display mode priority ranking
When an FM broadcast is received :
① **PS (Program Service Name) display**
② **RT (Radio Text) display**
③ **Frequency display**

① **PS (Program Service Name) display :**
When an RDS broadcast is received, the station name is automatically displayed.
If no PS data was sent, **"NO PS"** is displayed.
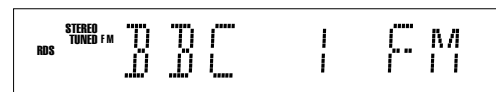
② **RT (Radio Text) display:**
Text accompanying RDS broadcast is scrolled on the display during reception. "**NO RT**" is displayed if the received RDS station is not accompanied with RT data.

Text is scrolled from the right to the left.
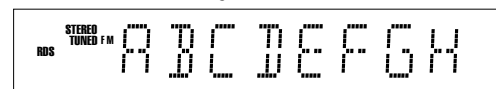
③ **Frequency display :**
The frequency of the current station is displayed.

40

Use the operating procedure on this page to store RDS stations automatically in preset memory. Up to 40 RDS stations can be preset and received with a simple key operation.
This unit is compatible with the RDS so it can use convenient RDS functions including automatic tuning and EON reservation.
RDS stations should be stored in the preset memory following the procedure in "Presetting RDS stations" before listening to RDS stations.

```
TUNER > Preset Memory       [✎]
Preset
01: ABC                    Auto
02: EFG                    Memo
03: HIJ                    Name
04: KLM                    Input
05: NOP    [△] [▽]         Enter
```
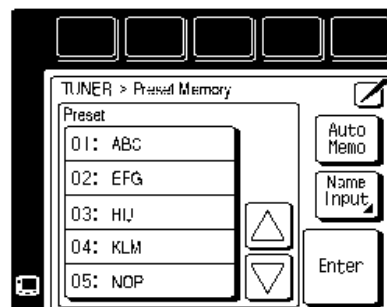
Presetting RDS stations (AUTO MEMORY)

The following procedure allows to select stations broadcasting RDS broadcast and store them in the preset memory (up to 40 stations can be preset).

1 *Select the TUNER input.*
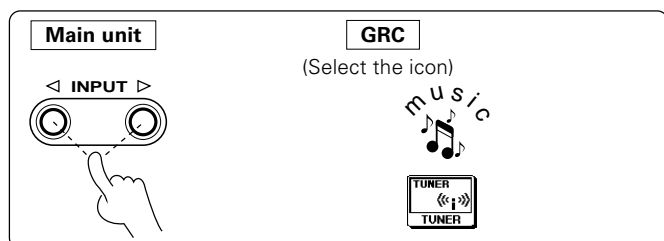
| Main unit | GRC |

◁ INPUT ▷   (Select the icon)

music

TUNER

| Main unit |

Each press switches the indication.
- ① **TUNER (Frequency display)**
- ② **CD**
- ③ **MD/TAPE 1**
- ④ **DVD/DVD 6ch INPUT**
- ⑤ **VIDEO 1**
- ⑥ **VIDEO 2**

Frequency display

89.00 MHz
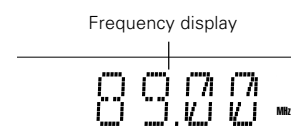
● The previously tuned frequency is displayed.

2 *Select the broadcast band "FM".*

| Main unit | GRC |

JTO BAND   (Select the icon)

Band

| Main unit |

Each press switches the indication.
- ① **FM**   ┌ ① **FM (Australia only)**
- ② **MW**   └ ② **AM (Australia only)**
- ③ **LW**

FM   89.00 MHz

Lights up
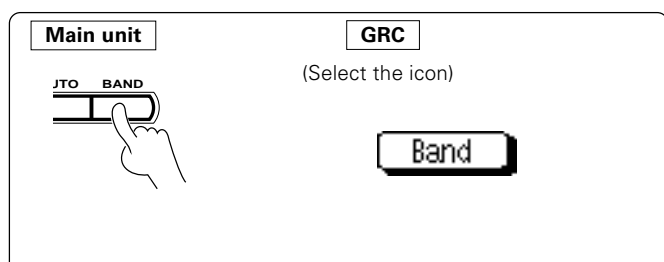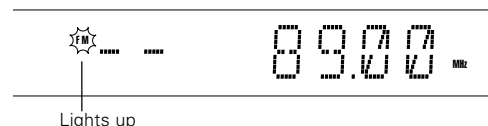
3 *Preset radio stations by AUTO MEMORY.*

| Main unit | GRC |

❶ Perform step **1~4** of "Tuning radio stations" → 38

❷ Press the "Memo" key during receiving a station.

(Select the icon)

Memo

Press the A.MEMO key.

A.MEMO AUTO

❸ Press the "Auto Memo" key.

(Select the icon)

Auto Memo

In a few minutes, the stations with which RDS broadcast is received are stored in order beginning from preset channels "01" (up to 40 stations can be preset).

If the number of stations with RDS broadcasting is less than 40, non-RDS FM stations will be preset after the RDS stations.

AUTO M·01
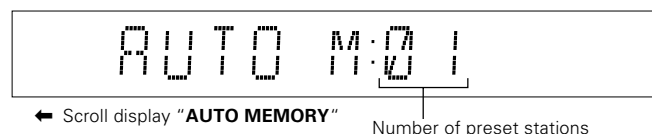
← Scroll display "**AUTO MEMORY**"   Number of preset stations

● If stations have already been stored in preset channels, the same number of these preset channels as the number of stations are replaced with the data of the newly preset stations.

The AUTO MEMORY function gives precedence to RDS stations and assigns them from preset number 1. Therefore, when it is required to preset RDS stations as well as non-RDS stations, execute the AUTO MEMORY operation first then proceed to the manual memory operation of non-RDS stations.

Preparation

● Select the **TUNER** input.　→ 19
● Display the Tuner operation menu. → 19

Order of radio station presetting

Other stations than the RDS stations can be stored in the preset memory by presetting them after the RDS stations preset by AUTO MEMORY as shown below or overwriting the RDS stations preset in some preset numbers.

Preset number
1 2 .... 39 40

① **AUTO MEMORY**　　　　② **Manual memory**
　RDS stations　　　　～　　FM, MW or LW stations
　(~ FM stations)　　　　　　FM, AM stations (Australia only)

Storing radio stations manually in preset memory

GRC

❶ **Perform step ❶~❹ of "Tuning radio stations"**　→ 38

❷ **Press the "Memo" icon during receiving a station.**

Memo

❸ **Select the preset channel for use in presetting the station.**
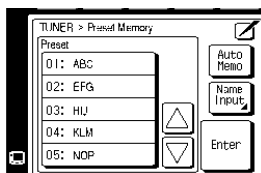
❹ **Press the "Enter" icon.**
(Select the icon)

❺ **Assigning a name to preset memory.**
(Select the icon)

Memo

❻ **Select the preset channel to be named by pressing △ or ▽.**

To decresase
To incresase
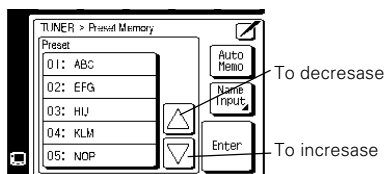
❼ **Press the "Name Input" icon to select the name input mode.**
(Select the icon)

Name Input

❽ **Compose a name.**
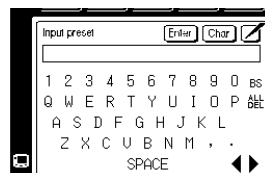
● Apart from the auto memory function, radio stations can also be stored manually in the preset memory.

● It is also possible to assign a station name to the manually preset station.
● Repeat steps ❶,❷,❸,❹ for each of the stations to be stored in memory.
● If a station is stored in a preset number which has already stored a station memory under it, the previous memory is replaced by the new memory content.
● If RDS stations are stored manually in the preset memory, the PS may not be included in the memory depending on receiving conditions.

● The name can be composed using up to 8 characters.
● Touch Char to access to lowercase characters. Touch it again to access special characters (such as @, !, &, etc.). Touch it a third time to return to uppercase characters.
● Touch ◀ or ▶ to move back and forth between the characters.
● Touch **BS** (Backspace) to clear the last caracter you entered. Touch **ALL DEL** to delete all the characters in the line.

42

| GRC |

❾ **Press the "Enter" icon to enter in memory.**
(Select the icon)
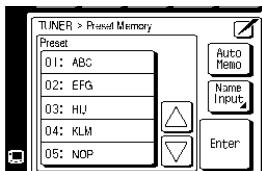
Enter

● To preset other stations, repeat ❻ to ❾ for each of them.

TUNER > Preset Memory
Preset
01: ABC
02: EFG
03: HIJ
04: KLM
05: NOP

Auto Memo
Name Input
Enter

❿ **Press the "Enter" icon.**

Enter

Receiving all preset stations in order (P. CALL)

| GRC |

❶ **Select the preset number of the desired station by pressing ⏮ or ⏭.**
(Select the icon)

Memo RDS

TUNER〉TUNER
Auto FM
Mode Band
01ch
ABC
FM 87.50MHz
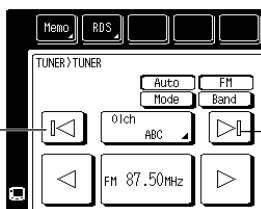
The preset number decreases.

The preset number increases.

● Every time the key is pressed, the next station in the order of the preset number is received.

When you press ⏭ key, ...

1 → 2 → 3 ········· 38 → 39 → 40

When you press ⏮ key, ...

1 ← 2 ← 3 ········· 38 ← 39 ← 40
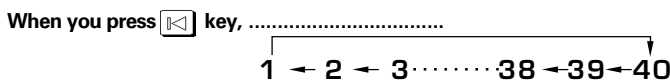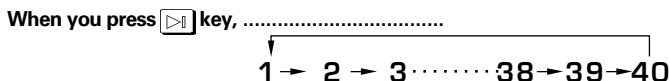
If the key is held pressed .... Preset stations will be received successively for about half a second each.

Receiving a preset station

| GRC |

❶ **Press the preset call icon.**
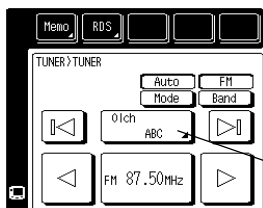
Memo RDS

TUNER〉TUNER
Auto FM
Mode Band
01ch
ABC
FM 87.50MHz

Preset call icon

❷ **Select the preset number of the desired station by pressing △ or ▽.**

TUNER > Preset call
Preset
01: ABC
02: EFG
03: HIJ
04: KLM
05: NOP

Auto Memo
Name Input
Enter

To decrease

To increase

❸ **Press the "Enter" icon.**
(Select the icon)

Enter

Preset number stored in memory

STEREO TUNED FM 15 89.00 MHz
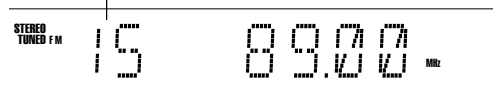
● Enter the preset number (max. 40) of the desired radio station.

By specifying the type of program (genre) you want to listen to, the tuner automatically searches for a station which is currently broadcasting a program of the specified type.

> With certain receiving conditions, it may take more than 1 minute until the search completes.

Preparation
- Preset **RDS** stations with the **AUTO MEMORY** function. → 40
- Select the **TUNER** input. → 40
- Set the receiving band to **FM**. → 40

Note ♪ **This step can be omitted if you have already executed the AUTO MEMORY procedure.**

Searching for a desired program type (PTY search)

1 Select the PTY search mode.

Main unit	GRC
	(Select the icon)

RDS PTY

TUNER «¡»
TUNER

RDS

PTY

STEREO TUNED FM *NEWS*
RDS PTY
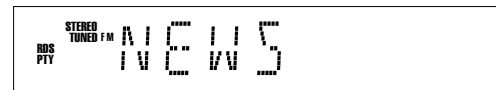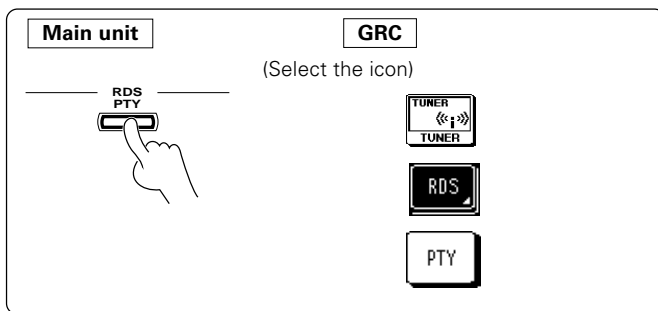
When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available, or if the station is not an RDS station, "NONE" is displayed.

2 Select the desired program type.

Use program type table on the right for your convenience.

Main unit	GRC

❶ When selecting with the ◁ or ▷ icons.
(Select the icon)

PTY SELECT

∨ TUNING ∧

Previous program type | Next program type

TUNER RDS

PTY | Off TA/NEWS | Disp

◁ | COUNTRY | ▷

Previous program type | Next program type

Select while **"PTY"** is lit.

The ◁ or ▷ icon allows to select desired program types from the 29 types. Press and hold the icon and release it when the desired type is displayed.
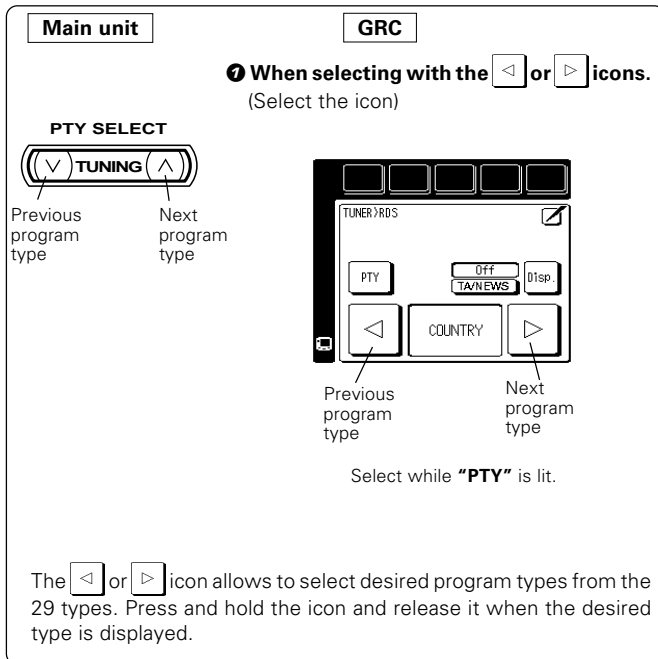
Program type table

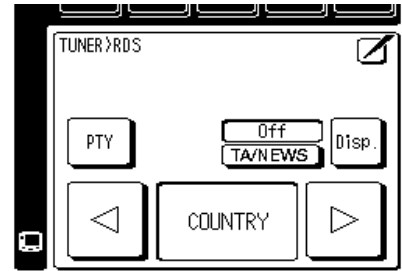|	Program Type Name	Display
(∨) DOWN ↑ ↓ (∧) UP	No program type or undefined	**NONE**
	Pop Music	**POP M**
	Rock Music	**ROCK M**
	Easy Listening Music	**EASY M**
	Light Classical	**LIGHT M**
	Serious Classical	**CLASSICS**
	Other Music	**OTHER M**
	News	**NEWS**
	Current Affairs	**AFFAIRS**
	Information	**INFO**
	Sport	**SPORT**
	Education	**EDUCATE**
	Drama	**DRAMA**
	Culture	**CULTURE**
	Science	**SCIENCE**
	Varied	**VARIED**
	Weather	**WEATHER**
	Finance	**FINANCE**
	Children's programs	**CHILDREN**
	Social affairs	**SOCIAL**
	Religion	**RELIGION**
	Phone in	**PHONE IN**
	Travel	**TRAVEL**
	Leisure	**LEISURE**
	Jazz Music	**JAZZ**
	Country Music	**COUNTRY**
	National Music	**NATION M**
	Oldies Music	**OLDIES**
	Folk Music	**FOLK M**
	Documentary	**DOCUMENT**

3 *Start the search.*

Main unit	GRC
	(Select the icon)

RDS
PTY

PTY
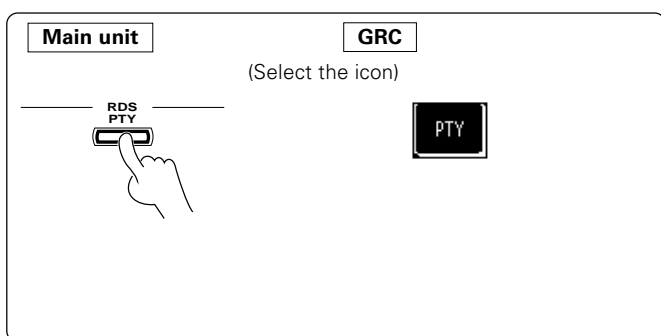
When searching for a Rock Music broadcast.

Display while the tuner is searching.

STEREO
TUNED FM
PTY
ROCK M

Blinks   Program type name display.

When a station is received.

STEREO
TUNED FM
RDS
PTY
BBC 1 FM

Goes off   Station name display.
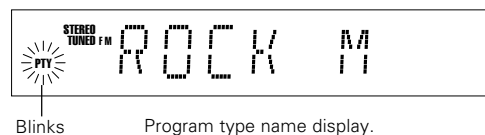
To change to a different program type:

Repeat steps 1, 2, 3.

- If search is started while the program type is "**NONE**", it turns automatically into "**POP M**".
- No sound is heard while **"PTY"** is blinking.
- If a program of the desired type cannot be found, **"NO PROG"** is displayed, then after several seconds the display returns to the original display.
- When a station with the selected program type is searched, its reception starts and the type name display changes to the station name display.

To cancel search in the middle of it

Main unit	GRC
	(Select the icon)

RDS
PTY

PTY
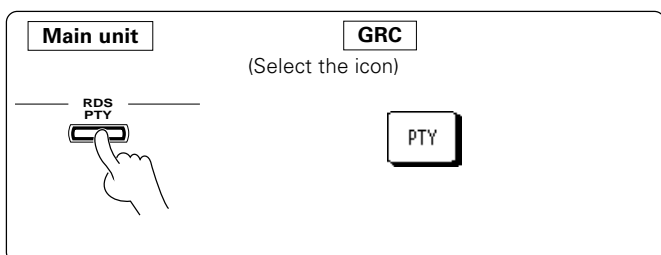
When the receiver is tuned to a RDS EON station (a station at which the EON indicator lights up), this function lets you set the receiver to automatically switch stations to receive news or traffic programs as they are broadcast. When the broadcast is over, the receiver returns to the original station automatically.

Preparation

Perform steps **1** to **3** of "**Presetting RDS stations (AUTO MEMORY)**". ➞ 40

Note This step can be omitted if you have already executed the AUTO MEMORY procedure.

● The EON function cannot be used if all of the 40 preset stations have been stored using the procedure in "**Storing radio stations manually in preset memory**". Be sure to use the AUTO MEMORY function. ➞ 41

Reserving the desired information *(EON reservation)*

1 Set the receiving band to FM.

Main unit	GRC

❶ Select the Tuner input.
(Select the icon)

◁ INPUT ▷

❷ Display the Tuner operation menu.

| Memo | RDS |
TUNER〉TUNER
Auto | FM
Mode | Band
|◁ | 01ch ABC | ▷|
◁ | FM 87.50MHz | ▷

TO BAND

❸ Select the FM Band.
(Select the icon)

Band

Main unit

Each press switches the indication.

➞ ① **TUNER (Frequency display)**   Frequency display
② **CD**
③ **MD/TAPE 1**
④ **DVD/DVD 6ch INPUT**
⑤ **VIDEO 1**
⬑ ⑥ **VIDEO 2**

89.00 MHz
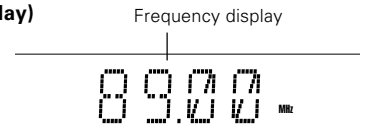
● The previously tuned frequency is displayed.

Each press switches the indication.

➞ ① **FM**   ➞ ① **FM (Australia only)**
② **MW**   ⬑ ② **AM (Australia only)**
⬑ ③ **LW**

FM

Lights up

2 Tune to a preset RDS station.

GRC

Select a station with which the EON and RDS indicators light.
(Select the icon)

PTY SELECT
∨ TUNING ∧

RDS

TUNER〉RDS
PTY | Off TA/NEWS | Disp.
◁ | COUNTRY | ▷

● Radio stations can also be selected by pressing the |◁ or ▷| key.

Display when "**TA**" is selected

RDS EON TP TA FM **BBC 1 FM**
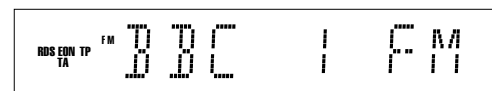
● If you want to reserve **TA**, receive a station with which the **TP** indicator lights.
● When "**EON**" does not light although an RDS station is received, that station is not transmitting EON data. Please select a different station.

TP (Traffic Program) indication

When the **"TP"** indicator is lit, this means that the presently-received station or a station in the same network is transmitting traffic information. When **"TP"** is displayed for the station being received, the traffic information of this station can be received without **EON** reservation.

3 *Select the desired kind of program.*

Main unit	**GRC**
	(Select the icon)
——— RDS ——— TA/NEWS	TA/NEWS

Display when **"TA"** is selected

STEREO
TUNED F M
RDS EON TP
TA

BBC   2   FM
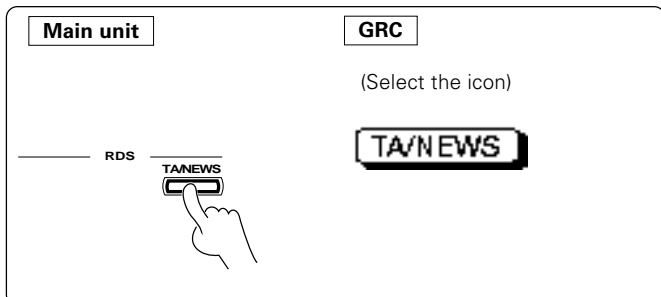
"TP" lights for stations where TP (Traffic Program) can be received.

Each press switches the indication.

- ① **TA** (Traffic Announcement)
- ② **NEWS** (News)
- ③ **TA/NEWS**
- ④ **OFF** (**EON** reservation cancelled)

● "**NO DATA**" is displayed if this operation is attempted before performing the AUTO MEMORY operation. → 40
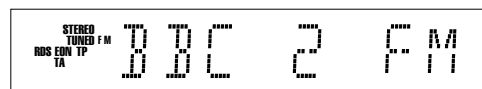
4 *Wait for a reserved reception to start.*

Leave the station with which the EON and RDS indicators light tuned in. The tuner stands by for the reception provided that the power is left ON.

**To keep listening to a tuner station:**

Receive a station with which the **"EON"** and **"RDS"** indicators light.

To listen to other source than tuner:

① While keeping the tuner tuned into a station with which the **"EON"** and **"RDS"** indicators light, select the desired source with the **INPUT SELECTOR**.

② Even when the **INPUT SELECTOR** is set to other source than **TUNER**, it is switched automatically to **TUNER** when EON-reserved broadcast starts.

In this period, the source pauses if the source selected in ① is **CD** or **MD**, or stops if it is **TAPE**.

③ When the EON-reserved reception completes, the **INPUT SELECTOR** returns to the previous input source.

If the **"EON"** indicator does not light in steps **3** and **4** and the desired kind of information has already been selected, the information from only the station being received will be waited for.

● The EON overriding does not occur during recording.
● When the unit is in STANDBY mode, the EON function does not operate.
● When the transmission of the selected program contents ends in case of automatic reception with the EON function, return will be made to the status directly before operation of the EON function.

To cancel EON reservation

Main unit	**GRC**
— RDS TA/NEWS	**Turn the "TA", "NEWS" indicators off.**
	(Select the icon)
	TA/NEWS
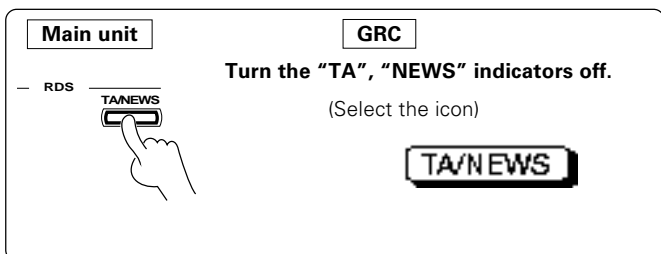
Each press switches the indication.

- ① **TA**
- ② **NEWS**
- ③ **TA/NEWS**
- ④ **OFF**

STEREO
TUNED F M
RDS EON
TA NEWS

BBC

Should be OFF.
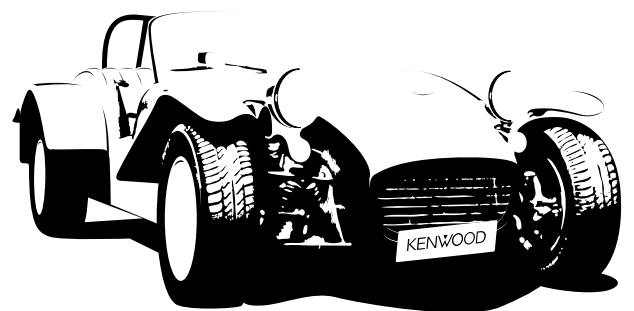
Ambience effects

This AV CONTROL CENTER incorporates 7 different sound modes to let you enjoy surround sound with a wide variety of program sources. The Dolby Digital (AC-3) and Dolby Pro Logic surround sound let you enjoy theater-like surround effects when you play Dolby Digital (AC-3) and Dolby Surround program sources (like Laserdiscs and DVDs). Dolby 3 Stereo creates a panoramic frontal sound field. The Digital Signal Processing (DSP) modes let you create a variety of different sonic environments from almost any type of program source.
To obtain the best possible surround sound, be sure to complete "Setup for surround play (SET UP)" before using the surround modes.

Surround modes

DTS

The DTS multi-channel audio format is available on CD, LD and DVD software. DTS is a strictly digital format and can not be decoded inside most CD, LD or DVD players. For this reason, if you attempt to listen to DTS encoded software through the analog output of your CD, LD or DVD player, you will experience digital noise in most cases. This noise can be quite loud if the analog output is connected directly to a high power amplification system. Proper measures for playing the digital output as described below should be taken to avoid this situation. To enjoy DTS Digital Surround playback, an external 5.1 channel DTS Digital Surround decoder system or an amplifier with a built-in DTS Digital Surround decoder must be connected to the digital output (S/P DIF, AES/EBU or TosLink) of a CD, LD or DVD player.

Center speaker
TV
Subwoofer
Front speaker
Surround speakers (stereo signal)
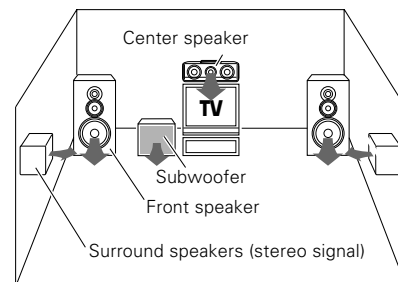
* Optional in this mode.

SRS Circle Surround

The Circle Surround System was developed to provide the highest level of sonic performance available in a Matrix system. Audio for music was not the focus for other multichannel formats and, as a result, there is a serious compromise in the performance of these systems. That is not to say that the Circle Surround system is only for music–other applications such as Cinema, Home Theater, multichannel broadcast, video tape and any other type of audio delivery can take advantage of the superior performance of Circle Surround. Since Circle Surround provides proper performance for music, the sonic impact for all other applications is also improved. Circle Surround 5.1 is capable of delivering true five-channel impact.

Center speaker
TV
Subwoofer
Front speaker
Surround speaker (stereo signal)
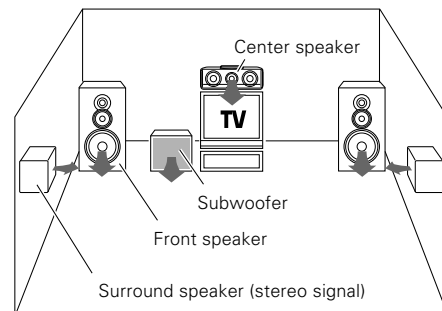
Dolby Digital (AC-3)

The Dolby Digital (AC-3) surround format lets you enjoy up to 5.1 channels of digital surround sound from Dolby Digital (AC-3) program sources (such as Laserdisc software marked ▯▯ DOLBY DIGITAL). Compared with previous Dolby surround, Dolby Digital (AC-3) provides even better sound quality, greater spatial accuracy, and improved dynamic range.

Note

Although a full set of speakers (front left, right, and center, Surround left and right, and a subwoofer) is required for true 5.1 channel Dolby Digital (AC-3) surround sound, this AV CONTROL CENTER lets you enjoy Dolby Digital (AC-3) (and Dolby Pro Logic) program sources, even if you connect only the front speakers.

Center speaker
TV
Subwoofer (LFE)*
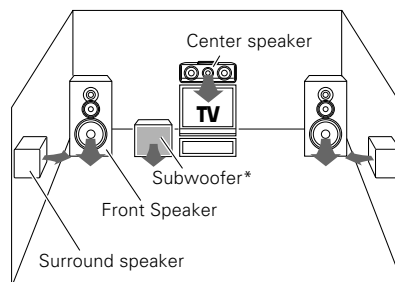Front speaker
Surround speaker (stereo signal)
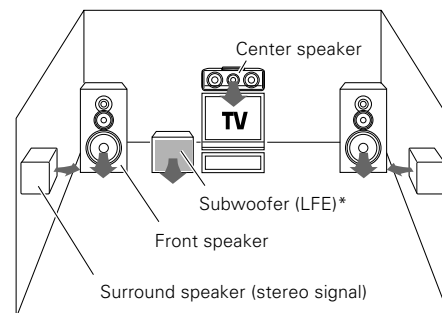
* LFE = Low Frequency Effects. This channel delivers separate non-directional bass signals to the subwoofer for more dynamic deep bass sound effects.
Although only Dolby Digital (AC-3) soundtracks incorporate a separate low frequency channel, connecting a subwoofer will also improve deep bass performance in the other surround modes.

Dolby Pro Logic

Dolby Pro Logic is a specially encoded 2 channel surround format designed to provide theater-like surround sound from Dolby Surround encoded sources (such as video and Laserdisc software marked ▯▯ DOLBY SURROUND). This AV CONTROL CENTER is equipped with a Dolby Pro Logic surround decoder to let you enjoy the wide variety of currently available Dolby Surround home video software.

Center speaker
TV
Subwoofer*
Front Speaker
Surround speaker

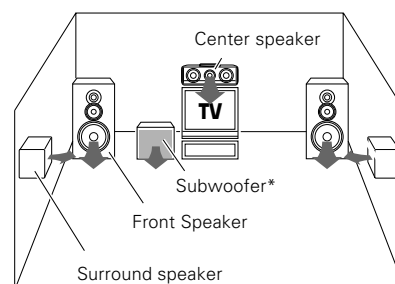* Optional in this mode.

Dolby 3 Stereo

Dolby 3 Stereo is available for systems that do not have surround speakers. When in the Dolby 3 Stereo mode the surround information is redirected to the front left and right speakers. This mode is designed for use with Dolby Surround program sources, but can also improve sound field unity for programs that are not Dolby Surround encoded. Dialog positioning and sound image definition, however, may not be as accurate when used with programs that are not Dolby Surround encoded.

Center speaker
TV
Subwoofer*
Front Speaker
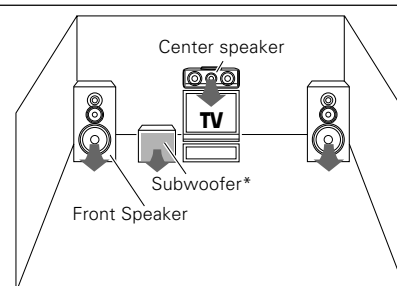
* Optional in this mode.

DSP mode

The **DSP** mode lets you add the atmosphere of a live concert or hall to PCM or analog of program source. These modes are particularly effective when used with stereo program sources, like CD, television, and FM radio. You might enjoy trying the **ARENA**, **THEATER**, **JAZZ CLUB** mode the next time you watch a concert or sporting event!

Center speaker
TV
Subwoofer*
Front Speaker
Surround speaker

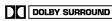* Optional in this mode.

DVD 6-channel INPUT mode

Using a DVD player or the like equipped with six (5.1) output channels and the receiver, you can enjoy multi-channel encoded DVD source material in all its splendor. Since the source signals are digital and each channel is input independently, the resulting sound quality, sense of spaciousness, and dynamic range are superb.

Center speaker
TV
Subwoofer
Front Speaker
Surround speaker
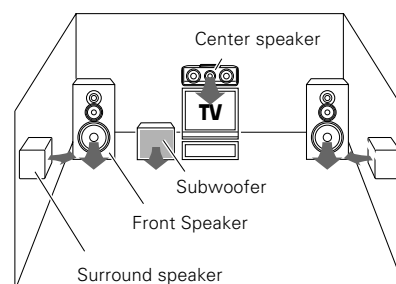
Recommended speaker installation

It is recommended that the surround speakers are installed straight to the left and right of the listening position or slightly behind, at a height of about 1 meter higher than the listener's ears.

50

The DTS compatible models can reproduce a CD, DVD or LD carrying the DTS mark. Dolby Digital (AC-3) can be used when playing DVD or LD software bearing the ▢▢ ᴰᴼᴸᴮʸ ᴰᴵᴳᴵᵀᴬᴸ mark and Dolby Digital (AC-3) format digital broadcasts (etc.). Dolby Pro Logic and Dolby 3 Stereo can be used when playing video, DVD, or LD software bearing the ▢▢ ᴰᴼᴸᴮʸ ˢᵁᴿᴿᴼᵁᴺᴰ mark. DSP modes can be used with any source except Dolby Digital and DTS.
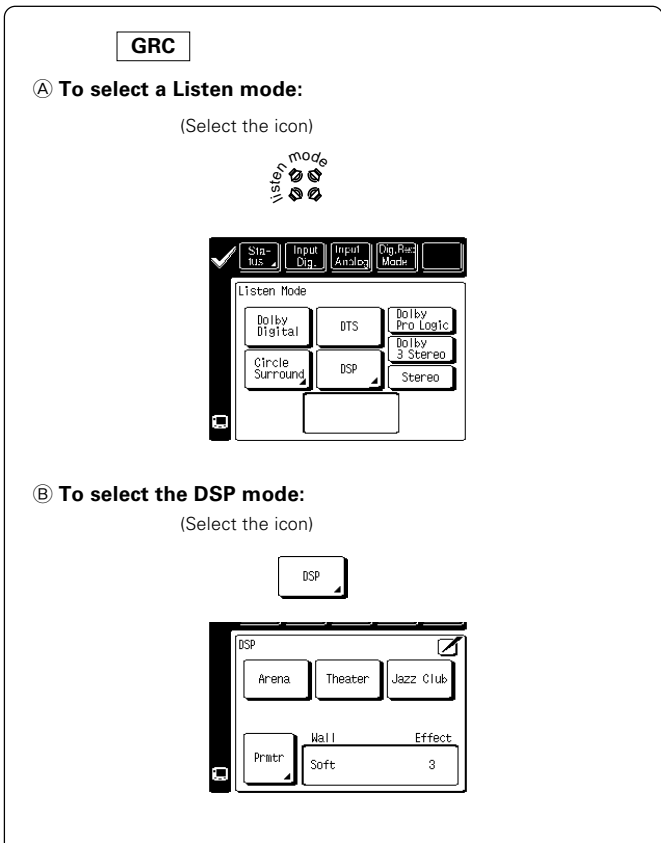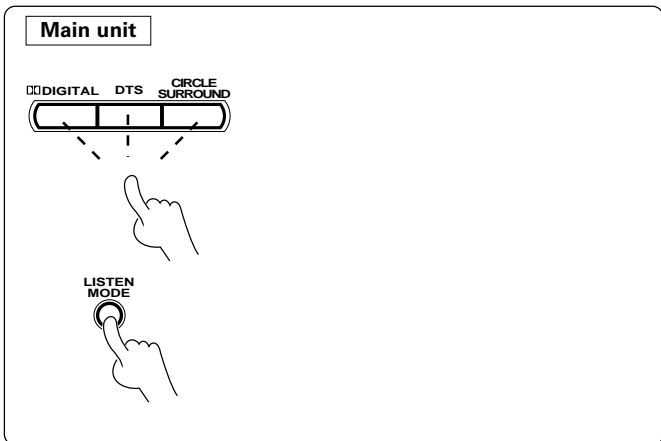
Preparations

● Turn ON related components.
● Complete "**Setup for surround play**".　→ 23
● Set the **INPUT SELECTOR** to the component you wish to play back with surround sound.
● Use the **INPUT MODE** key to select the input mode (analog or digital) for the source you wish to play back.　→ 18

<div>

Sound may not be reproduced when the input signal and Listen mode are selected improperly.
How to select the digital input, analog input and LISTEN MODE.　→ 53

</div>

Surround play (LISTEN MODE)

1 *Play video or music software.*

2 *Select the LISTEN MODE.*

Main unit

▢▢ DIGITAL　DTS　CIRCLE SURROUND

LISTEN MODE

GRC

ⓐ **To select a Listen mode:**

(Select the icon)

listen mode

ⓑ **To select the DSP mode:**

(Select the icon)

DSP

● The listening mode settings are stored separately for each input. If the input mode is set to digital auto ("**AUTO SOUND**" lights), the receiver selects the optimal listening mode automatically based on the type of input signal and the speaker settings.
● Note that the only listening mode settings that can be used for playback with the current input signal type and speaker settings are available.

When a Listen mode is selected:
● Select the Listen mode according to the software to be played.

Main unit

Display　　　　　　Listen mode
　DTS
　DOLBY DIGITAL
　CIRCLE SURROUND

Each press of the **LISTEN MODE** key switches the mode as follows.
　① **PRO LOGIC**　　　: Dolby Pro Logic
　② **3 STEREO**　　　: Dolby 3 Stereo
　③ **CS CINEMA (Circle surround)** :
　④ **CS MUSIC (Circle surround)**　:
　⑤ **ARENA (DSP)**　: A lively feeling as felt in the frontmost seat in a concert arena.
　⑥ **THEATER (DSP)**　: A lively sound field like in a theater.
　⑦ **JAZZ CLUB (DSP)** : Sound field of a jazz live house where cymbals sound sharply.
　⑧ **STEREO**　　　　:

● ② cannot be selected when "**C**" has been set to Off in the Setup operation.
● ①, ③ and ④ cannot be selected when "**LS/RS**" has been set to Off in the Setup operation.
● The **LISTEN MODE** key is not accepted during headphone listening.
● Switching is not possible when the **DVD 6ch INPUT** is used.
● Noise will be produced when a DTS source is played by selecting the analog input.
● When playback is started, the sound may be cut or interrupted before the input source is confirmed as Dolby Digital.
● If a Dolby Digital signal having more channels than the maximum number of playback channels available using the receiver's current settings is input, the **DOWNMIX** indicator lights on the display and downmixing is performed to match the number of available channels.
　Example : If a Dolby Digital 5.1 signal is being input and the receiver is set to the stereo mode or if the center speaker channel is turned off.
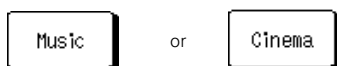
GRC

ⓒ **To select the Circle surround mode:**

(Select the icon)

Circle
Surround

Circle Surround

Music   Cinema
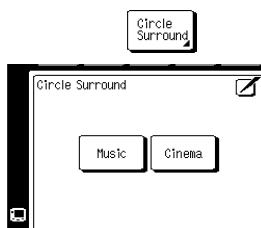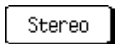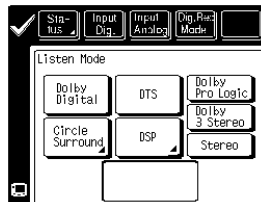
① **Select the Circle surround type.**

(Select the icon)

Music   or   Cinema

To end surround play

Main unit   GRC

❼ **Select the "Stereo" icon.**

(Select the icon)

LISTEN
MODE

Sta-
tus   Input
Dig.   Input
Analog   Dig.Res
Mode

Listen Mode

Dolby
Digital   DTS   Dolby
Pro Logic

Circle
Surround   DSP   Dolby
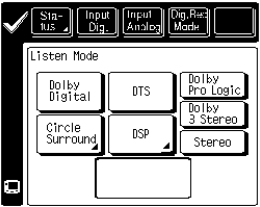3 Stereo

Stereo

Stereo

To select the DSP mode *(DSP)*
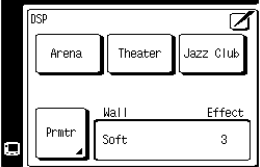
1 Select the DSP surround mode.

GRC

❶ Select DSP.
(Select the icon)

listen mode

❷ Select the "Arena" "Theater" "Jazz Club".
(Select the icon)

● This can be selected when the input signal is other than DTS, Dolby Digital (AC-3).

Main unit

Each press **LISTEN MODE** key switches the indication.

① **PRO LOGIC**
② **3 STEREO**
③ **CS CINEMA**
④ **CS MUSIC**
⑤ **ARENA**
⑥ **THEATER**
⑦ **JAZZ CLUB**
⑧ **STEREO**

● ② cannot be selected when "**C**" has been set to Off in the Setup operation.
● ①, ③ and ④ cannot be selected when "**LS/RS**" has been set to Off in the Setup operation.
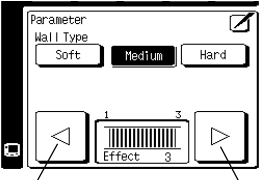● The **LISTEN MODE** key is not accepted during headphone listening.

● The effects of adjustments are applied equally to sound fields ⑤ to ⑦.
● Switching is not possible when the **DVD 6ch INPUT** is used. ➔ 28

2 Select the adjustment parameter.

GRC

❶ Display the setup screen.

To decrease   To increase

① **WALL TYPE**
Select "**Soft**", "**Medium**" or "**Hard**".
② **EFFECT LEVEL**
Adjust with keys ◁ and ▷ .

● The EFFECT level can be adjusted between 1 and 3.

Listen mode selection

Surround play of digital input

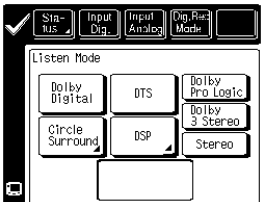| INPUT selector	DVD (COAXIAL), CD (OPTICAL)		
Input signal	DTS	Dolby digital *1	PCM *1
Listen mode	① DTS ② STEREO	① DOLBY DIGITAL ② PRO LOGIC ③ 3 STEREO ④ STEREO	① PRO LOGIC ② 3 STEREO ③ CS CINEMA ④ CS MUSIC ⑤ ARENA (DSP) ⑥ THEATER (DSP) ⑦ JAZZ CLUB (DSP) ⑧ STEREO

Surround play of analog input

INPUT selector	DVD 6ch INPUT	MD/TAPE1, VIDEO1, 2, CD, TUNER
Input signal	Analog	Analog *1
Listen mode	The switching is not available when the **DVD 6ch INPUT** is selected. → 28	① PRO LOGIC ② 3 STEREO ③ CS CINEMA ④ CS MUSIC ⑤ ARENA (DSP) ⑥ THEATER (DSP) ⑦ JAZZ CLUB (DSP) ⑧ STEREO

● *1 : The possible selections may be limited depending on the played source and speaker setting.
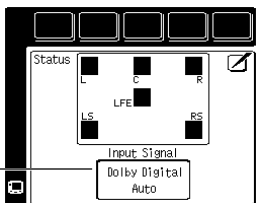
Checking the current status (Status) (Remote control only)

GRC

❶ **Select the "listen mode" icon.**

(Select the icon)

listen mode

❷ **Select the "Status" icon.**

(Select the icon)

Sta-
tus

Input mode of the signal being input

● The encoding channel is displayed only during decoding of Dolby Digital/DTS. It is not displayed during Analog or PCM input operation.

Clock adjustment

This unit incorporates a clock function. Be sure to adjust the correct time before using the timer function.
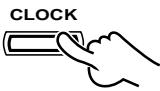
> The time display blinks after a power failure or when the power cord has been unplugged from the AC outlet and plugged in again. In such a case, adjust the clock again.

Clock adjustment (Main unit only)

1 Activate the clock adjustment mode.

Main unit
CLOCK

❼ **Press the CLOCK key.**

2 Enter the hour.

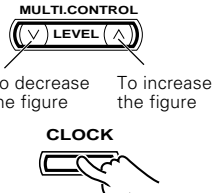| Main unit |
|---|
| MULTI.CONTROL LEVEL |
| To decrease the figure / To increase the figure |
| CLOCK |

❶ **Press and hold the CLOCK key for more than 2 seconds. (The time display starts to blink.)**
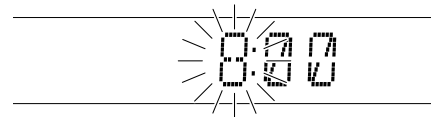
❷ **Set the figure of hour.**

❸ **Press the CLOCK key.**

Example: Adjustment to 8:15

● Press the **CLOCK** key. The hour is entered and the minute display starts to blink.
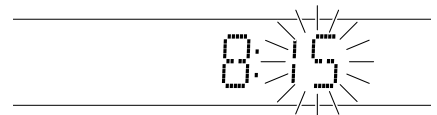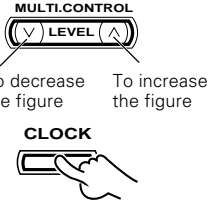
3 Enter the minute.

Main unit
MULTI.CONTROL LEVEL
To decrease the figure / To increase the figure
CLOCK

❶ **Set the figure of minute.**

❷ **Press the CLOCK key.**

● If you make a mistake, restart from the beginning.
● To adjust correct time, press the **CLOCK** key at the same moment as a time announcement.

Displaying the Time

Main unit	GRC
CLOCK	SET UP
	FL Disp.

Each press of DISPLAY switches the displayed information alternately.

To switch between the 12-hour/24-hour display
(Main unit only)

Press and hold the **CLOCK** key

➀ **24-hour display**
➁ **12-hour display**

● From the second press, each press switches between 24h and 12h alternately.

Timer operation

Two 24-hour timer systems (TIMER 1, TIMER 2) (which can be used every day) and a sleep timer system (which works only once) are available.
In each of TIMER 1 and TIMER 2, the timer data including the operating period and played contents can be set and selected to be activated or not as required.

Timer reservation is possible for the two types TIMER 1 and TIMER 2 at the same time.

● Please make reservations with an interval of at least one minute, so that the operation times of TIMER 1 and TIMER 2 do not overlap.

Timer playback, timer recording (TIMER 1, TIMER 2)
With each of the two timer programs, a selected source can be played (or radio broadcast can be recorded) in the previously set time period.
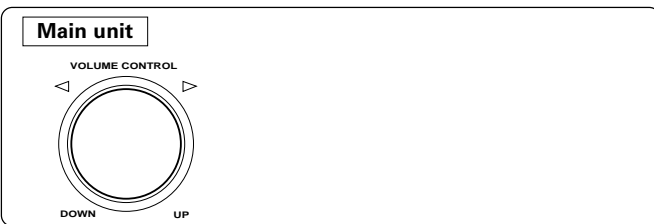
Sleep timer
The unit is put to STANDBY mode automatically after the specified period has elapsed.   → 58

Timer programming

1 Make preparations for the play (recording).

● To listen to radio	● To listen to CD	● To listen to MD	● To listen to DVD	● For broadcast recordings
The station should be preset before timer programming. → 40 → 41 → 42	Insert a disc. (Program playback is not possible.)	Insert a MD.	Insert a disc. (Program playback is not possible.)	Make preparations for recording. → 38

2 Adjust the listening volume.

Main unit

VOLUME CONTROL
◁   ▷

DOWN   UP

● The **VOLUME CONTROL** should be set to the desired volume while the unit is ON.
● The MUTE function is activated during timer recording.

3 Select a TIMER No.

Main unit

TIMER MODE
❶ Select the program timer mode.

TIMER SET
❷ Press while reservation content is displayed.

Each press of the key switches the **TIMER** numbers as follows.

① **TIMER 1**
② **TIMER 2**
③ **TIMER 1,2**
④ **OFF**

TIMER 1

● The selected TIMER No. lights.
● If a previously programed TIMER No. is selected, the contents will be replaced by the new contents programd.
● The timer programming operation is not possible when **TIMER 1,2** have already been selected.

4 Enter the ON time (Hour).

Main unit

MULTI.CONTROL
∨ LEVEL ∧
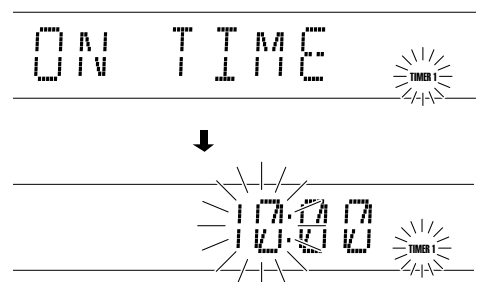To decrease the figure   To increase the figure

❶ Set the figure of hour.

TIMER SET
❷ Enter the figure in memory.

ON TIME   TIMER 1

↓

10:00   TIMER 1

● If you make a mistake, restart from step **3**.

5 *Enter the On time (Minute).*

Main unit

MULTI.CONTROL
∨ LEVEL ∧

To decrease   To increase
the figure   the figure

❶ Set the figure of minute.

TIMER SET

❷ Enter the figure in memory.

● After entering the figure of "**hour**" with the procedure in step **5**, enter the figure of "**minute**" using the same procedure.

`10:10` TIMER 1
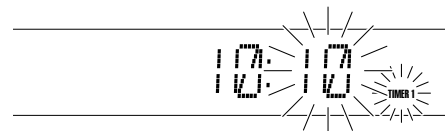
● If you make a mistake, restart from step **3**.

6 *Enter the OFF time (Hour).*

Main unit

MULTI.CONTROL
∨ LEVEL ∧

To decrease   To increase
the figure   the figure

❶ Set the figure of hour.

TIMER SET

❷ Enter the figure in memory.

`OFF TIME` TIMER 1

↓

`11:00` TIMER 1
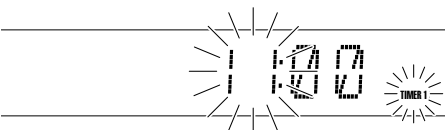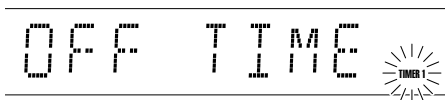
● If you make a mistake, restart from step **3**.

7 *Enter the OFF time (Minute).*

Main unit

MULTI.CONTROL
∨ LEVEL ∧

To decrease   To increase
the figure   the figure

❶ Set the figure of minute.

TIMER SET

❷ Enter the figure in memory.

● After entering the figure of "**hour**" with the procedure in step **7**, enter the figure of "**minute**" using the same procedure.

`11:10` TIMER 1
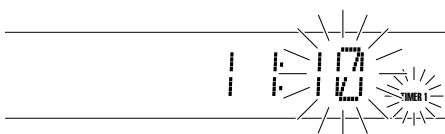
● If you make a mistake, restart from step **3**.

8 *Make the desired reservation.*
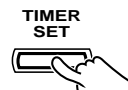
For timer playback

| Main unit |

❶ **Select the mode.**

MULTI.CONTROL
∨ LEVEL ∧
Down   Up

TIMER
SET
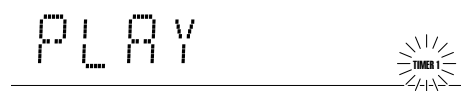
① **Select "PLAY"**
(Each press alternates them.)

► |PLAY| : At the ON time, playback starts.
► REC

PLAY

TIMER 1

② **Enter it.**

---

❷ **Select the input source.**

MULTI.CONTROL
∨ LEVEL ∧
Down   Up
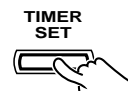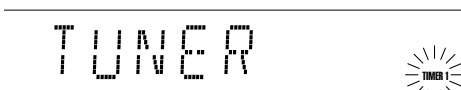
① **Select the source to be played.**
(Each press switches the following).
► ① **TUNER**
② **CD**
③ **MD/TAPE 1**
► ④ **DVD/DVD 6ch INPUT**
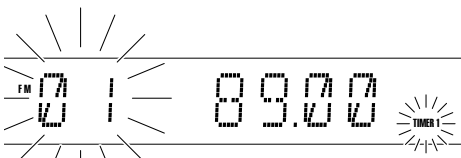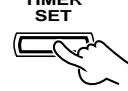
TIMER
SET

② **Enter it.**

Display when TUNER is selected

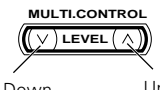TUNER

TIMER 1

---

❸ **Select the broadcast station (only when TUNER is selected above).**

MULTI.CONTROL
∨ LEVEL ∧
Down   Up

① **Select the preset station No.**

FM 01 89.00

TIMER 1

TIMER
SET

② **Enter it.**
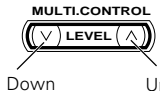
● The station to be received with timer must be preset beforehand.
→ |40| → |41| → |42|

The reservation contents cannot be cleared. The contents are cleared only when they are changed.
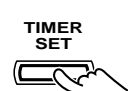
Timer recording of broadcasts

| Main unit |

❶ **Select the mode.**

MULTI.CONTROL
∨ LEVEL ∧
Down   Up
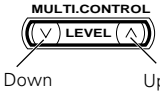
① **Select "REC".**
(Each press alternates them.)
► PLAY
► |REC|

TIMER
SET

② **Enter it.**

---

❷ **Select the broadcast station.**

MULTI.CONTROL
∨ LEVEL ∧
Down   Up

① **Select the preset station No.**

TIMER
SET

② **Enter it.**

Activating the timer

1 *Activating the timer*

Select the TIMER No.to be used.

| Main unit |

TIMER
MODE

Each press of the key switches the **TIMER** numbers as follows.
► ① **TIMER 1** ...... Execution of timer 1 only.
② **TIMER 2** ...... Execution of timer 2 only.
③ **TIMER 1, 2** .. Execution of timers 1 and 2.
└ ④ Off
● The selected TIMER No. lights.
● The timer will not function unless a TIMER No. is selected.

Check the reservation content.

Main unit

TIMER MODE
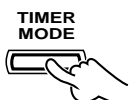
Select the TIMER number to be checked.

Each press of the key switches the **TIMER** numbers as follows.

① **TIMER 1** ...... (Contents of the timer 1 are displayed.)
② **TIMER 2** ...... (Contents of the timer 2 are displayed.)
③ **TIMER 1, 2** .. (Contents of the timer 1 and timer 2 are displayed.)
④ Off

● The reserved contents will be displayed for 2 seconds per item. After this, the previous display content appears again.

To change the reserved contents
Restart the procedure of "Timer programming" from the beginning. →⑤⑤

When timer operation is not required

TIMER MODE
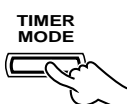
Press so that all TIMER No. indicators are OFF

Each press of the key switches the **TIMER** numbers as follows.

① **TIMER 1** ...... (Only the timer 1 is carried out.)
② **TIMER 2** ...... (Only the timer 2 is carried out.)
③ **TIMER 1,2** ... (Both timers 1 and 2 are carried out.)
④ Off .... (No timer operation is carried out.)

● The reservation contents are held in memory.

To set the same timer program again

TIMER MODE
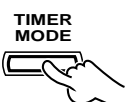
Press so that the desired TIMER No. indicators light.

Each press of the key switches the **TIMER** numbers as follows.

① **TIMER 1** ...... (Only the timer 1 is carried out.)
② **TIMER 2** ...... (Only the timer 2 is carried out.)
③ **TIMER 1,2** ... (Both timers 1 and 2 are carried out.)
④ Off .... (No timer operation is carried out.)

● Also prepare the disc or tape and adjust the listening volume.

2 Set the | / ⏻ (ON/STANDBY) switch to STANDBY.

Main unit

| / ⏻

ON/STANDBY

Lights in green.

Sleep timer (Remote control only)

Setting the number of minutes until the unit is put to standby mode.

GRC

❼ Select the "sleep" icon

sleep

90 min.
Sleep
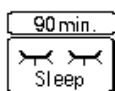
● This unit is turned STANDBY automatically after the set time has elapsed.
● While the **SLEEP** indicator is lit, the remaining sleep time is displayed in the Sleep area of the GRC display.

● Each press increases the time by 10 minutes. The maximum time that can be set is 90 minutes.

10→20→30...70→80→90→0→10→20...

Lights up.

SLEEP 90 SLEEP
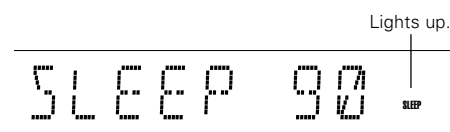
Duration for sleep timer.

To cancel
Turn STANDBY or select "Sleep" icon repeatedly until the sleep time is cancelled (0).

Maintenance

Maintenance of the unit

When the front panel or case becomes dirty, wipe with a soft, dry cloth. Do not use thinner, benzine, alcohol, etc. for these agents may cause discoloration.

In regard to contact cleaner

Do not use contact cleaners because it could cause a malfunction. Be specially careful not to use contact cleaners containing oil, for they may deform the plastic component.

Reference

Memory backup function

Stored contents which are cleared immediately when power plug is unplugged from power outlet	Clock display
Stored contents which are cleared in at least a day after power plug is unplugged from power outlet	**Amplifier section** ON/STANDBY status (ON or STANDBY) Input selection Video output Volume control value Tone bass level Tone treble level Input level Input selection mode **Surround section** LISTEN MODE Speaker setup Distance adjustment LEFT level RIGHT level CENTER level SURROUND level SUB WOOFER level MID NIGHT on/off **Tuner section** Receiving band Frequency Preset stations Program settings

In case of difficulty

What appears to be a mulfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can corrected before seeking help from your dealer or service representative.

How to reset the microcomputer

The microcomputer may malfunction (impossibility of operation, erroneous display, etc.) when the power cord is unplugged and plugged in again while the unit is in ON mode with the Ι/ᶲ key pressed or due to other external causes. In this case, execute the procedure on the right to reset the microcomputer and return the unit to the normal condition.

①**Unplug the power cord from the wall outlet.**
②**While holding the Ι/ᶲ (ON/STANDBY) key depressed, plug the power cord into the wall outlet again.**

● Resetting the microcomputer clears the memory you entered and returns it to the initial condition when the unit left the factory.

Amplifier

Symptom	Cause	Remedy
Sound is not output or the volume level is low.	● Connection cords are unplugged from the jacks. ● MUTE is ON. (The MUTE ON indicator is blinking) ● The **TAPE 2/MONITOR** is set to ON. ● The selected surround mode does not match the input signal.	● Connect them properly referring to "**System connection**". →⑤ →⑧ ● Press the **MUTE** key to OFF. →㉘ ● Set the **TAPE 2/MONITOR** to OFF. ● Select the surround mode according to the input signal. →㊳
Standby LED blinks and sound is not output.	● Speaker cords are short-circuited.	● Unplug the AC cord, remove the short-circuiting and plug the AC cord again.
Sound is not output from the surround speaker and/or center speaker, or their sound is very small.	● The surround speaker cords and/or center speaker cord are disconnected. ● The Surround play mode has not been engaged. ● The surround and center speaker levels are set to the minimum positions.	● Connect them by referring to the power amplifier's instruction manual. ● Set the presence mode. →㊽ ● Adjust the surround and center speaker levels.
System control is not available when MD or TAPE 1 is selected.	● "**MD**" or "**TAPE 1**" is not displayed.	● Set up the GRC unit properly. →⑮
System control is not available when DVD or 6ch INPUT is selected.	● "**DVD**" or "**DVD 6ch INPUT**" is not displayed.	● Switch the display to show "**DVD**" or "**DVD 6ch INPUT**". →⑩ →⑮
System control is impossible.	● System control cords are connected incorrectly.	● Connect them correctly by referring to "**System connection**". →⑤ →⑧

Tuner

Symptom	Cause	Remedy
Radio stations cannot be received.	● No antenna is connected. ● The broadcast band is not set properly. ● The frequency of the desired station is not tuned.	● Connect an antenna. →⑨ ● Set the broadcast band properly. →㊳ ● Tune the frequency of the desired station. →㊳
Interference.	● Noise due to ignition noise of an automobile. ● Noise due to an influence from an electric appliance. ● Noise due to a nearby TV set.	● Install the outdoor antenna away from the road. ● Turn off the power to the appliance. ● Install the system farther away from the TV set.
A station which was preset cannot be received by pressing the corresponding numeric key.	● The preset memory was cleared because the power cord had been unplugged for a long period of time. ● The **TUNER** input is not selected.	● Preset the stations by auto memory again. →㊵ ● Select the **TUNER** input.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	● Batteries are exhausted. ● The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. ● The audio cords and system control cords are not connected properly. ● The source component to be operated does not contain the tape(s) or disc.	● Replace with new batteries. →⌷13⌷ ● Operate the remote control unit within the controllable range. →⌷12⌷ ● Connect properly referring to "System connection". →⌷5⌷ →⌷8⌷ ● Place the tape(s) or disc in the source component to be played.
The GRC screen is not displayed.	● Batteries are exhausted.	● Replace with new batteries. →⌷13⌷
Remote control operation is not available though the GRC screen is displayed.	● The microcomputer is malfunctioning.	● Reset the GRC unit. →⌷14⌷

Specifications

⚠ *Caution : Read this page carefully to ensure safe operation.*

For C-V751

Audio section

Total harmonic distortion (1 kHz, 1V)
.... 0.01 %
Signal to noise ratio (IHF'66)
  CD .... 93 dB
Input sensitivity / impedance
  CD .... 200 mV / 47kΩ
Tone controls
  BASS .... ± 10 dB (at 100 Hz)
  TREBLE .... ± 10 dB (at 10 kHz)
Output level / impedance
  TAPE REC .... 200 mV / 1 kΩ

Video section

VIDEO inputs / outputs
  (composite) .... 1 Vp-p/75 Ω

Digital section

Sampling frequency
.... 32 kHz,44.1 kHz,48 kHz
Digital input
  (coaxial) .... 0.5 Vp-p/75 Ω
  (optical) .... -15 dBm~-21 dBm, 600 nm ± 30 nm

FM Tuner section

Tuning frequency range .... 87.5 MHz~108 MHz
Usable sensitivity (DIN)
  MONO .... 1.2 µV (at 75 Ω) / 13.2 dBf
                                        (40 kHz dev., S/N 26 dB)
  STEREO .... 35 µV (at 75 Ω) / 42 dBf
                                        (46 kHz dev., S/N 46 dB)
Signal to noise ratio (DIN weighted at 1 kHz, 40 kHz dev.)
  MONO .... 65 dB (65.2 dBf input)
  STEREO .... 60 dB (65.2 dBf input)
Selectivity (DIN ± 300 kHz) .... 64 dB
Stereo separation (DIN, 1 kHz) .... 36 dB
Frequency response .... 30 Hz~15 kHz, + 0.5 dB, – 3.0 dB

MW Tuner section

Tuning frequency range .... 531 kHz ~ 1,602 kHz
Usable sensitivity
  (30% mod., S/N 20 dB) .... 20 µV / (700 µV / m)
Signal to noise ratio
  (at 30% mod. 1mV input) .... 48 dB

LW Tuner section

Tuning frequency range .... 153 kHz ~ 279 kHz
Usable sensitivity
  (30% mod., S/N 20 dB) .... 35 µV
Signal to noise ratio
  (at 30% mod. 1mV input) .... 45 dB

AM Tuner section (for Australia)

Tuning frequency range .... 531 kHz ~ 1,602 kHz
Usable sensitivity
  (30% mod., S/N 20 dB) .... 20 µV / (700 µV / m)
Signal to noise ratio
  (at 30% mod. 1mV input) .... 48 dB

General

⚠**Power consumption** .... 35 W
AC outlet
  UN SWITCHED (for Australia) .... 1: (Total 100 W max)
  UN SWITCHED (except Australia) .... 2: (Total 100 W max)
  Dimensions .... W: 400 mm (15-3/4")
                 .... H: 105 mm (4-1/8")
                 .... D: 382 mm (15-1/16")
Weight (net) .... 5.2 kg (11.4 lb)
Weight (net) (For Australia) .... 5.1 kg (11.2 lb)

🎵 **Notes** 1. KENWOOD follows a policy of continuous advancements in development. For reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

KENWOOD

For your records
Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model_____ Serial Number_____